Alternative Dispute Resolution and Natural Resources

Building Consensus & Resolving Conflicts in the Twenty-first Century

Conference Proceedings

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U.S. Institute for Environmental Conflict Resolution
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Udall Center for Studies in Public Policy at The University of Arizona

INTRODUCTION

The field of alternative dispute resolution (ADR) offers all parties involved in natural resources disputes additional tools and processes to engage in constructive, non-adversarial problem solving. The purpose of this conference was for federal, state, and local government agency staff, together with resource managers and users, environmentalists, community-based groups, and private property owners, to learn from ADR experts and from each other about their experiences with environmental conflict resolution and consensus building in the context of natural resource management.

This national conference sponsored by the U.S. Institute for Environmental Conflict Resolution of the Morris K. Udall Foundation, The University of Arizona's Udall Center for Studies in Public Policy, the U.S. Department of the Interior, and the U.S. Department of Agriculture–Forest Service drew over 425 attendees from across the nation and from Mexico and Chile. Five plenary sessions and fifty-seven panel sessions took place over the two and a half day period. Panel sessions covered three main categories:

- *ADR processes* such as scoping, convening, monitoring implementation, evaluation, issues of neutrality and right to know
- *Stakeholder concerns and issues* such as collaboration and consensus building, managing issues that span multiple agencies and jurisdictions, experiences and successes of ADR in Native American issues
- *Scientific and technical issues* such as the use of GIS and decision support systems, improving communication of technical information for stakeholders, the general public and the media

The feedback from this conference has been overwhelmingly positive and enthusiastic. Look for a similar conference in the coming years.

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Morning Plenary

Wednesday, May 17, 2000

Chasing the Elusive Goal: Resolving Natural Resources Disputes
By David J. Hayes, Deputy Secretary, U.S. Department of the Interior

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Chasing the Elusive Goal: Resolving Natural Resources Disputes

By David J. Hayes, Deputy Secretary, U.S. Department of the Interior

Disputes involving natural resources are in the news. Should dams on the Snake River be breached to help save salmon runs from extinction? Should we stop building roads in the national forests, or stop repairing the ones that we have? Should snowmobiles and jet skis be banned in the national parks? Should oil drilling be allowed in the Arctic National Wildlife Refuge? Should we increase our use of public funds to purchase open space? Should mountaintop removal be allowed as a coal mining technique in Appalachia? Should we take more aggressive steps to reduce the threat that global warming poses to our resources?

These are some of today's hot button resource issues that are playing out on a national stage. There are many more in our backyards. How can we reconcile the impact of urban sprawl with special habitat needs for endangered species, or with open space or recreational needs for citizens? How will scarce water supplies be allocated in watersheds that cannot seem to support all of the competing demands of growing urban populations (golf courses and all), agriculture, and the need to maintain in-stream flow for fish and environmental needs? Should a new mining, forestry, or geothermal project go forward in a remote area with important ecological values, or in areas of special religious significance for tribes? Should a highway be built through an area that includes ancient petroglyphs, or through a habitat for an insect that has a strange name? How do we choose between the economic benefits of river channelization and the ecological losses associated losing free-flowing streams? What types of environmental conditions should be placed on private hydropower operations that use public resources?

The list seems endless. And as our nation continues to grow and our world shrinks, and as science provides us with more information about the implications of our actions, natural resource conflicts are growing in number, and intensity. We must find ways to solve these difficult issues. Natural resource issues can ignite passions and politics on a scale that rarely is matched in other contexts. And when left unaddressed, the conflicts typically become harder to resolve, as vested interests become more entrenched and as the symbolism of conflict becomes an end in itself.

Obstacles to Resolving Natural Resources Disputes

While it is easy to identify the importance of resolving natural resource disputes, it is difficult indeed to identify dispute resolution techniques that work in this arena. The special challenges to resolving these disputes can be overwhelming. Unlike business disputes, where money typically can grease a settlement, clashing value systems often are at stake in natural resources disputes. People can feel very strongly about these matters, and may not be willing to compromise. Also, because the dispute typically involves a finite natural resource, the tools to resolve the dispute may be limited: Will the trees be cut down or saved? Will the water be used to protect endangered fish, or

will it be diverted for agricultural use? Will the land be set aside for a park, or will it be developed into a new subdivision?

The Solomonic solution of dividing the contested resource in two or somehow sharing the benefits of the resource typically is not workable. Indeed, because there may not be a common currency for bartering a “win win” solution, parties may have little incentive to work through an accommodation. Determined executives, community leaders and/or interest groups may decide that it is all or nothing. Period. It does not help that some of our most vexing natural resource disputes arise in the west, where “high noon” show-downs still provide many with a sense of both excitement and entertainment.

Add to this discouraging profile the fact that natural resource issues almost always implicate public assets and/or regulatory systems. As a result, government officials like me are typically in the mix and—even worse yet—so are elected officials. Also, because many natural resource conflicts have implications and tie-ins to broader landscapes and ecosystems, the number and type of interested parties can quickly mushroom until there are an unmanageable number of private and public stakeholders at the table, reflecting an incredibly broad array of interests and agendas.

The CAL-FED process in California is my favorite current example. In addressing how California uses water in the ecologically-significant Bay Delta region, CAL-FED that has a potential impact on virtually all Californians who have an interest in how the state’s water supplies are utilized. And in California, that means that everybody is at the table.

As a final discouraging note, the rules of the game in natural resources disputes typically are not well defined, and many of the interested parties may have little experience in the legal frameworks involved or any sense of how such disputes are being resolved elsewhere. Those parties who are seeking to utilize natural resources in a business-as-usual manner (e.g., without regard to meaningful regulatory restrictions and/or organized, effective opposition by interest groups) may be slow to learn that the world has changed. Having always gotten their way before, they may assume that they will get their way again.

Indeed, it is not hard to find business interests that depend on the use of natural resources (real estate developers, water users, timber and mining companies, etc.) acting like many chemical and auto executives did in the 1970s and early 1980s—that is, contemptuous of potential legal constraints, belittling of environmental or community opposition, and having great faith in the ability of their political friends to clear away the underbrush and make their projects happen. Twenty years ago many chemical and auto executives likewise were slow to recognize that the new wave of regulatory restrictions on industrial practices represented a real, permanent change in how they would conduct business. Some (but certainly not all) of the businesses and other interests who today depend on access to natural resources to build new homes, to divert water for power, crops, or other uses, or to extract minerals, timber, and other assets from the land, are similarly slow to recognize that regulatory restrictions, local opposition, and other conflicts that are now becoming more and more prevalent are serious problems that must be addressed in a serious way, and not simply as passing nuisances.

Hope for Conflict Resolution in the Natural Resources Field

Having pointed out the importance of finding ways to resolve conflicts in the natural resources field while, in the same breath, offering a discouraging litany of obstacles to conflict resolution, are there any signs of hope on the horizon? The answer is—and must be—yes. Let me explain why I think that this is the case.

First, we are facing intractable conflicts that are driving everybody nuts at every turn in the natural resources field. For purposes of promoting conflict resolution, this is a good thing! While the old ways of doing business have been slow to change in some quarters, and while there remain strong pockets of "denial," I believe that something akin to the sea change that occurred in the corporate world in the late 1970s and early 1980s regarding the realization that strict environmental requirements were a new, and unchangeable, fact of life, is now occurring in the natural resources field.

By way of example, the Endangered Species Act is changing the way that business is conducted in California, Arizona, the Pacific Northwest, and southern Florida. The venerable Federal Power Act, which regulates the relicensing of private hydropower operations, is showing teeth. Concerns about unplanned sprawl, and the loss of open space, are affecting major development projects in virtually every large metropolitan area in the U.S. New applications of the Clean Water Act are requiring second looks at water quality impacts on many watersheds. Oil drilling offshore of California, and in the Arctic National Wildlife Refuge is dead for now—and maybe forever. These realities are sinking in.

Second, the courts are proving to be incapable of resolving most natural resources disputes. Occasionally, a court will exercise its injunctive powers to stop all parties in their tracks, but rarely can courts craft a judicially imposed remedy that resolves the underlying dispute. The spotted owl dispute in the Northwest is a good example. While court action was an important catalyst for bringing serious attention to the natural resource conflicts in the Pacific Northwest, it took the energy, creativity, and leadership of the administration and other interested parties, not the court, to come up with a solution to the problem—the Northwest Forest Plan.

While courts sometimes can influence natural resource disputes on a timely basis through the entry of injunctive relief or other interventions, the more common scenario finds courts adopting leisurely schedules that string out decision making for many years, and/or framing disputes in narrow, legal terms that provide limited help to parties who are looking to develop comprehensive solutions to complex disputes. In the case of contested water rights, for example, it is not uncommon for instream adjudications to proceed in state courts for decades without discernable progress being made toward resolution. Likewise, lawyers who tell their clients that they should resist regulatory constraints and prosecute a "takings" case in the federal courts typically are condemning their clients to years and years of continued uncertainty in return for a low, lottery-style chance at a big monetary payoff.

A third factor that is prompting interest in exploring alternative dispute resolution approaches in the natural resources arena is the developing track record for using new legal tools to negotiate solutions to complex disputes. Under the Endangered Species Act (ESA), for example, Secretary Babbitt has championed Habitat Conservation Plans (HCPs) as a mechanism to protect important habitat for endangered species, while allowing acceptable development to go ahead. Through HCPs, a "win win" solution can emerge, with real estate developers having some certainty regarding acceptable areas of development, while endangered species gain biologically significant areas of habitat set-asides that would never be possible through a case-by-case ESA enforcement strategy.

Likewise, under the Federal Power Act, the Federal Energy Regulatory Commission is experimenting with a "collaborative" rulemaking process that provides a forum for negotiated settlements among interested stakeholders of complex hydropower relicensing proceedings. Early results are encouraging.

New models for addressing the use of federal lands are emerging as well. The Southern Nevada Public Land Management Act of 1998 will allow land-needy Las Vegas to have market price-based access to federal lands for growth so long as most of the proceeds from the sale are plowed into conservation activities. In a similar vein, large land swaps involving federal and state lands are going forward in some states in order to accommodate mutual interests in preserving some ecosystems while allowing development to proceed elsewhere, in accordance with a sensible, negotiated plan.

An additional cause for hope is the trend toward the use of third party mediators in natural resources disputes. Mediators are at work in the massive New York State tribal land claims cases. Mediators also are at work in some of the difficult water rights adjudications that dot the West, including the Snake River adjudication, and some of the long-standing water rights cases in Arizona (Little Colorado; Upper Gila). In these cases and others, mediators are playing a useful role by serving as go-betweens, delivering tough messages, and helping, in some cases, to move negotiations along. The Udall Center, under the leadership Terry Bracy and Kirk Emerson, is playing a trailblazing role at introducing the concept of third party mediators into natural resources disputes.

Need for Different Dispute Resolution Models for Natural Resources

I could end my comments here and, I hope, have made a straightforward and credible case why we are at the dawn of effective use of dispute resolution techniques in the natural resources field. But I would be remiss if I did not share with you three additional observations on this topic that spring from my own experience over the last several years.

First, I am convinced that the tendency to turn to third party neutrals to resolve natural resource disputes needs to be tempered with a dose of reality. For while third party neutrals can play a useful role in many natural resources disputes, many of these con-

flicts are not resolvable outside the courts unless governmental decision makers and policymakers are willing to become dispute resolution facilitators. Stated differently, effective dispute resolution in the natural resources arena often requires the strong involvement of a public party who has the political, legal, or institutional standing to make something happen.

Let me give an example or two to develop the point. I played the role of facilitator of a new water agreement among the major California parties who have Colorado River water rights. The agreement has long-standing implications on water use in California and throughout the Colorado River Basin. While I am not unwilling to take credit for some ability as a facilitator or mediator, I also am not naive. The agreement would not have been struck, in my view, if I had been a neutral third party mediator. Because I was the Deputy Secretary of the Department of the Interior, representing the federal side of the Colorado River water rights agreements at issue, I had access to both carrots and sticks that helped the parties work out a new arrangement among themselves.

Another example was the acquisition of the Headwaters old-growth redwood forest in northern California. The acquisition was full of conflicts among the U.S., the State of California (our co-purchaser), the Pacific Lumber Company, and interested stakeholders. That deal would not have happened without the “mediation” of Senator Diane Feinstein. And Senator Feinstein would not have been an effective mediator if she had not been in a powerful political position to persuade all of the parties to settle on a mutually agreeable solution. An unhappy U.S. senator is in a position to make life miserable for everyone. When that power is linked with an honest effort to work through difficult issues in a balanced way, a powerful combination is achieved.

Likewise, Secretary Babbitt and I are involved currently in an intense effort to develop a consensus-based solution to the long-standing water and environmental conflicts in the California Bay Delta region. We are playing a dual role of seeking consensus on a plan among very disparate interests—a classic mediator role—while also sitting as the ultimate decision maker on several key issues, including administration of the Endangered Species Act. Again, we have sticks and carrots at our disposal. Carrots include potential regulatory certainty, commitments to defined operational approaches, and potential access to federal dollars and other resources. Sticks include the regulatory chaos that is sure to follow if an acceptable plan is not worked out. Having these powerful tools in the hands of the party that is attempting to facilitate a solution to a complex natural resources dispute is, in my view, indispensable to success. In the case of CAL-FED, a mediator without portfolio would be of limited use.

There is no mystery why a public figure may need to become actively engaged in dispute resolution if natural resources conflicts are to be resolved. As noted above, natural resources have inherent public trust features, and public officials have special responsibilities, and potential tools, when it comes to addressing conflicts involving resources within their purview. A third party neutral can cajole, but typically only a public official can deliver, and frequently a creative public official is needed to work through “the art of the possible” within the institutional constraints of a large federal agency or agencies.

There is a second, unique feature to many natural resources disputes that bears upon how they can be approached, and resolved—namely, the role of science. Having access to good science to provide a baseline understanding of environmental conditions can make the difference in shaping a resolution to a natural resources dispute.

Unfortunately, many natural resource conflicts develop their own mythologies, and interested parties all too frequently would rather continue to fight than pause and pursue answers to key scientific questions. Time and time again, however, it has become apparent that having good science can show the way toward the reconciliation of competing demands. Longstanding conflicts regarding the trade-offs between operating the Glen Canyon Dam for power versus the environment, for example, have largely been answered through a rigorous program of science and related experimentation. Questions regarding how much water will be needed to restore salmon runs in the Trinity River are being answered based on a 15 year flow study that has the scientific community buzzing. Scientists are providing valuable input that should help address the conflict between the U.S. Army's interest in expanding desert tank operations at Fort Irwin, California, and some of the most important remaining habitat for the endangered desert tortoise. And the Salton Sea Science Subcommittee, formed in late 1997 under the leadership of Dr. Milt Friend, has provided invaluable scientific input that will help decision makers plan for the Salton Sea's future.

Although examples of the important role that science can play in helping to resolve natural resources disputes are everywhere you turn, there remains a reluctance, in many quarters, to invest in science, or to wait for scientific input, prior to decision making. More often than not, that is a mistake. For while science may not be able to speak definitively enough to dictate a path toward resolution of a dispute, rigorous scientific analysis often can narrow the scope of differences and provide a common basis for resolution of natural resource problem.

My third observation is that training and experience are important keys to success in these endeavors. Land managers, biologists, tribal leaders, and other parties with a stake in a natural resource disputes should not be expected to have an innate ability to work through difficult issues with stakeholders. There are lessons to be learned, techniques that work better than others, and experiences to be shared. Investing in training should be a top priority. In addition to helping key officials to participate in organized dispute resolution initiatives, training and learning about problem solving techniques may have a subsidiary benefit as well: improving our listening capabilities and encouraging an openness to creative solutions to difficult problems.

Conclusion

This is an exciting and important time in the natural resources field. The worm is turning. Increasingly, the playing field is being leveled and parties who have different views regarding the appropriate use of natural resources are fighting to a stalemate. Courts rarely are helping unblock such stalemates. The application of innovative dispute resolution efforts may be the only hope.

Because important values often are at stake in natural resources disputes, it is incumbent upon all of us to become problem-solvers of the first order, actively exploring a variety of dispute resolution approaches. As we embark on this new adventure, we must have our eyes open and be eager to learn by our successes and failures. Go to it! Time is a wasting!

SESSION I

WEDNESDAY, MAY 17, 2000
10:15-11:45 A.M.

A River Ran through It

Wednesday, May 17, 2000—10:15-11:45 a.m.

Moderator

Monica Medina, Heller, Ehrman, White, and McAuliffe, Washington, D.C.

Panelists

Scott Faber, American Rivers, Washington, D.C.

John H. Davidson, University of South Dakota School of Law, Vermillion, SD

Panel Abstract

During the twentieth century, the Corps of Engineers altered the landscape dramatically by harnessing rivers throughout the U.S. in order to provide flood control, power, irrigation, and transportation for the surrounding areas. The results have been mixed with respect to flood control, devastating for fish and wildlife, and threaten to stunt the growth of more economically promising uses of the rivers, such as recreation. The purpose of this panel is to examine how ADR could be used to rewrite the Corps' "Principles and Guidelines" for river management in order to rebalance the priority of uses for these rivers. For example, through ADR it could be decided how and when to remove dams or levees, whether and how to compensate those who will be adversely impacted by a shift in uses, and how to obtain congressional approval and local matching funds to pay for any changes to a river system. In addition, on a project-by-project basis ADR could be used to help the Corps work with local stakeholders to define the scope of projects and to plan and develop projects so that a multiplicity of interests are heard.

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Multi-stakeholder Negotiation as Resource Tool

Wednesday, May 17, 2000—10:15-11:45

Moderator

Karen Malkin, U.S. Fish and Wildlife Service, Washington, D.C.

Panelists

Petuuche Gilbert, Acoma Realty and Natural Resources, Acoma, NM

Shawn Kendall, The Kendall Group, AZ

Dave Simon, National Park Conservation Association, Albuquerque, NM

Jim Souby, Western Governors' Association, Denver, CO

Panel Abstract

The Clean Air Act Amendments of 1990 mandated that the Environmental Protection Agency (EPA) create a commission to help address visibility impairment at the Grand Canyon National Park and 15 other Class I areas on the Colorado Plateau (National Park Service, U.S. Fish & Wildlife Service, and U.S. Forest Service Lands). The commission consisted of twelve western state governors; four tribal government leaders; and senior officials from the EPA, National Park Service (NPS), U.S. Fish & Wildlife Service, U.S. Forest Service, and Bureau of Land Management. (The federal officials were nonvoting, *ex officio* members.) Industry, academic, and public interest representatives served along with government representatives on various working committees that reported to the commission. Stakeholders came to the process with diverse interests and opinions. The commission needed a highly structured process to achieve balanced, fair recommendations. The panelists will discuss what worked well and what did not in terms of the process, from their perspectives.

Panel Summary

Individual Papers

Grand Canyon Visibility Transport Commission Case Study
By Karen Malkin

Governors' Perspectives
By Jim Souby

Industry Perspectives: GCVTC Critical Success Factors
By Shawn B. Kendall

Tribal Perspectives: Tribal Involvement in Making Recommendations for Improving Western Vistas
By Petuuche Gilbert

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Grand Canyon Visibility Transport Commission Case Study

By Karen Malkin, U.S. Fish and Wildlife Service, Washington, D.C.

Summary of Proceedings

This program convened a panel of key representatives from federal, state, and tribal governments and stakeholders who were involved in negotiating the consensus recommendations of the Grand Canyon Visibility Transport Commission (commission or GCVTC). The panelists discussed their goals for the process and lessons learned. A brief summary of the discussion follows. The Powerpoint presentation shown during the session follows for reference, as is Mr. Gilbert's paper titled "Tribal Involvement in Making Recommendations for Improving Western Vistas."

Comments of Ms. Malkin

Karen Malkin, who was the National Park Service representative on the GCVTC Operations Committee and other committees, opened the session by describing the visibility problem, the Commission's statutory mandate, and the GCVTC process. She explained that the visibility impairment at and around the Grand Canyon was a public problem caused by air pollution from many near and far sources. The Clean Air Act Amendments of 1990 mandated that the Environmental Protection Agency (EPA) create the commission to help address visibility impairment at Grand Canyon National Park and 15 other Class I areas on the Colorado Plateau (National Park Service, U.S. Fish & Wildlife Service, and U.S. Forest Service lands). The commission consisted of eight western state governors, four Tribal Government leaders, and senior officials from EPA, National Park Service (NPS), U.S. Fish & Wildlife Service (FWS), U.S. Forest Service (USFS), and Bureau of Land Management (BLM). The federal officials were nonvoting, ex officio members. Industry, academic, and public interest representatives served along with government representatives on various working committees that reported to the commission. Stakeholders came to the process with diverse interests and opinions. The commission needed a highly structured, yet flexible, transparent process to achieve balanced, fair recommendations.

Ms. Malkin described the many important process aids that led to the development of consensus recommendations. These included using professional facilitators, establishing principles and criteria that all participants agreed to, small group drafting sessions, open communication, and recording decisions and action items. Because the participants knew that if the group failed to come up with consensus recommendations than EPA would draft regional haze regulations on its own, the participants had a strong incentive to stay the course and work through sticky issues.

She described the roles of the four federal agencies. EPA served as a technical advisor and financier. NPS sought to educate the participants about the visibility impairment problem and get meaningful recommendations in the most efficient manner possible. The other federal land managers shared NPS' interest, but generally placed a lower priority on the visibility issue. All of the land managers and especially BLM and USFS

were concerned that any recommendations not undermine their fire management programs.

Comments of Mr. Simon
Due to an unavoidable last minute conflict, the environmentalist representative, David Simon, Regional Director for the National Parks & Conservation Association, was unable to attend the conference. His presentation was summarized by Karen Malkin. The environmentalists felt severely outnumbered and out financed compared to industry participants. They felt the process took too long for what was accomplished, and felt that they were beaten into consensus. The environmentalists are all spread too thin on many issues in many geographic areas. He surmised that the environmental groups might have achieved more emissions reductions sooner by suing EPA for failing to promulgate regional haze regulations in a timely manner or for failing to apply Clean Air Act technology requirements to older sources significantly contributing to visibility impairment. He noted that the work of the tribal and federal representatives, along with the environmental representatives, was key to achieving any meaningful GCVTC recommendations.

Comments of Mr. Souby
Next, Jim Souby, executive director of the Western Governors' Association (WGA), described the time line and implications of the governors' actions and policy decisions. He noted that at the December 1990 WGA meeting, one month after passage of the Clean Air Act Amendments, former Arizona Governor Fife Symington offered a policy resolution commending the establishment of the GCVTC and directing WGA to become the project manager, which the governors passed unanimously. As WGA's executive director, Mr. Souby chaired the GCVTC Operations Committee, which provided operational leadership and oversight throughout the process.

The governors saw the commission as a major opportunity to manage a key environmental issue in a way that would bring them credibility and trust in the environmental arena. The governors wanted the commission to be stakeholder driven to the maximum extent practicable; balanced, open and inclusive in all deliberations. The commissioners appointed key stakeholders to a Public Advisory Committee (PAC). In 1995, the commissioners challenged the PAC to develop consensus recommendations by 1996.

Mr. Souby attributed the commission's success to strong leadership and management from key individuals including governors, state executives, a core group of stakeholders, and project staff, and a strong, persistent emphasis on communications and use of common procedures that could be trusted by all participants yet adapted to meet the complexities of the project. He noted that as a result of going through the commission process, the governors concluded that large scale, complex consensus processes can work if they are disciplined and rigorous, which led to the development of the "Enlibra Doctrine" of environmental management described at <www.westgov.org/enlibra>.

Comments of Mr. Kendall
Shawn Kendall, president and CEO of the Kendall Group, Inc. and formerly with the

Phelps, Dodge Corporation, provided industry perspectives on the GCVTC. Mr. Kendall served on the GCVTC PAC, the Alternative Assessments Committee, and on the Technical Committee and subcommittees. He noted that industry had a big stake in the commission process due to high potential exposure of their sources and facilities; i.e., pollution controls are expensive. He saw three keys to success: 1) technical input to the policy debate was controlled by the technical subcommittees, scientists; 2) stakeholders established consensus criteria and assessment process; and 3) PAC had a charge and a deadline to develop consensus recommendations. He described the integrated technical and assessment processes the commission used. He noted that long bus rides to field locations facilitated the trust needed for the PAC to effectively collaborate.

Comments of Mr. Gilbert

Petuuche Gilbert, tribal councilman and natural resources officer for the Acoma Pueblo, provided some important tribal perspectives. Mr. Gilbert represented his tribe on the Operations Committee. Like the environmental groups, the tribes felt disadvantaged in the process, particularly because they were not invited to be on the commission in its early stages and then had to play catch-up. The technical data was complex and confusing. The tribes needed technical expertise of their own to help them understand the issues and implications for tribal lands. EPA funded a consultant to perform a Tribal impact study to analyze economic and demographic impacts of alternative emissions management scenarios on tribal lands. Tribes also needed financial assistance to enable them to travel and participate in the many GCVTC meetings. Once they were able to get this assistance from EPA, the Tribes worked hard, but there were simply not enough people to serve on all the committees. Tribal participants felt the assessment process, with the tribal impact study, did not adequately evaluate and describe the unique economic structures and demographic patterns of the tribes nor their unique cultures and aspirations.

A major challenge was trying to represent all of the tribes. There are 211 sovereign tribes in the states represented on the commission; however, only 4 tribes directly represented themselves on the commission. This caused some consternation among tribal staff involved in meetings. The direct involvement of the National Tribal Environmental Council (NTEC), a consortium of over 75 member tribes, helped coordinate tribal involvement. As individual participants in the GCVTC process, tribal personnel joined together and reached consensus on a number of issues, on behalf of all the tribes affected. One of the recommendations that tribes successfully got the full GCVTC consensus on was for two co-chairs, one state governor and the other a tribal leader, for the successor body implementing the GCVTC recommendations; i.e., the Western Regional Air Partnership (WRAP).

Concluding Remarks

During the short question and answer session, all panelists agreed that having a mandate with a source of funding and a deadline with consequences were key elements to the success of the commission. Relationships established during the commission process continue on in the WRAP and in many other ways. The process of consensus building helped spark trust and cooperation in a vast and diverse region on a complex issue. The GCVTC process sets a precedent well worth learning from.

Case Study Presentation

Clean Air Act requirements

- 1977 Clean Air Act (CAA) sets national goal of no “manmade” visibility impairment in Class I parks and wilderness areas
- Federal land managers have “affirmative responsibility” to protect park resources; legislative history instructs Land Managers to be vigilant and file law suits, as necessary
- Grand Canyon visibility impairment well documented—good visibility days declining
- National Park Service (NPS) struggles to address problem; expends significant resources to monitor, model, assess causes, and pollution controls
- 1990 Congress mandates federal agencies and states to form Grand Canyon Visibility Transport Commission (GCVTC) to address problem and report to Environmental Protection Agency (EPA) Administrator
- 1991 EPA plans Commission with NPS and U.S. Forest Service (USFS)

Grand Canyon Visibility Transport Commission

- Jurisdiction expanded to cover visibility at 16 Class I areas on Colorado Plateau in addition to Grand Canyon National Park—common air quality concerns
- Over several years, GCVTC Transport Region expands to include 9 states (AZ, CA, CO, ID, NV, NM, OR, UT, WY) and 211 tribal lands
- The voting commissioners are 8 western governors and tribal leaders of 4 Tribes (Navajo, Hopi, Hualapai, and Acoma Pueblo).
- Senior managers from EPA, NPS, USFS, U.S. Fish & Wildlife Service (FWS), Bureau of Land Management (BLM), and Columbia River Inter-Tribal Fish Commission are nonvoting, *ex officio* members.
- Early on, industry representatives and environmental groups sought a voice on the commission
- Many stakeholders representing a wide variety of interests, including industry, academia, local government, and civic affairs participate on working committees and comment on work products

Process aids

- Bylaws
- Work plan
- Regular meetings and conference calls—open to public
- Communication
- Trained, neutral facilitators
- Brainstorming options, without commitment
- Developing shared technical basis
- Legitimate ground rules (see guiding principles)
- Minutes, recording decisions and action items
- Small workgroup drafting efforts, especially consensus drafting group

Developed criteria for assessment of options

1. Visibility effects (in Class I areas)
2. Economic effects
3. Social effects
4. Other environmental effects
5. Equity
6. Administrative ease and effectiveness

- Formal and ad hoc workgroups and subcommittees, e.g., manage contracts, budget issues, public education
- Building ongoing relationships
- Forming coalitions
- Knowing what the best alternative was to a negotiated agreement—EPA drafts regional haze rule on its own

Role of federal agencies

- EPA—technical advisor, group observer
- Federal land managers—vested/frustrated, need to make GCVTC process work to reduce visibility impairing emissions
- Federal land managers, especially USFS and BLM, concerned that visibility program not curtail fire management—prescribed burns

Guiding principles

- Achieve reasonable progress towards national visibility goal
- Address all important sources of visibility impairing emissions
- Apply emissions control measures equitably
- Prevent future impairment by protecting clear days
- Remedy existing impairment by reducing present levels of emissions
- Take a regional approach
- Maintain existing federal/state laws
- Consider costs and benefits of controls
- Consider social, cultural, and environmental factors
- Develop action plans for all recommendations
- Provide funding mechanisms

GCVTC 1996 recommendations

- Description of process
- Guiding principles
- Glossary
- Executive summary
- Technical data made easy to read

Emissions recommendations

- Air pollution prevention
- Stationary sources
- Mobile sources

- Area sources/fire
- Clean air corridors
- Emissions in/near Class I areas
- Pollution prevention
- Emissions from Mexico
- Future scientific and technical needs

Follow-up
- Recommendations endorsed 11 to 1 by commissioners and 95+ percent of all participating stakeholders
- EPA promulgated regional haze rules that accommodated GCVTC recommendations
- Western Regional Air Partnership provided framework to advance implementation of GCVTC recommendations
- WRAP using/building on GCVTC processes
- Public awareness enhanced—public cares
- Monitoring suggested some significant reductions in emissions of concern—recommendations are feasible and can be strengthened

Example: Stationary sources
- Recommendations established emission cap or target for SO2 by 2000 based on 13 percent projected SO2 reduction for 1990-2000
- Current data suggests target exceeded—20 to 30 percent S02 reduction in 2000 from 1990 levels

Post mortem on GCVTC process
- Would you do it again?
- What worked well?
- What did not?
- What would make the process more operational, more effective?

Environmental group perspective (Dave Simon, NPCA)
- Felt severely disadvantaged—out numbered and out financed compared to industry
- Process took too long—jury still out on whether it was worth it—might have had more emissions reductions sooner by suing
- Consensus “beaten”—consensus recommendations too weak
- Key to have tribes and federal agencies involved

Governors' Perspectives

By Jim Souby, Executive Director, Western Governors' Association

Key features of the commission (governors' perspective)

Timeline of important decisions

- 1991—Assigned management to WGA to provide continuous, undivided project management
- 1992—Adopted a policy framework for commission deliberations: balanced, open and inclusive
- 1993—Expanded geographic scope of commission from Grand Canyon to Colorado Plateau
- 1992—Adopted comprehensive work plan and created the committee structure
- 1993—Adopted comprehensive internal and external communications policy to ensure credibility and trust among all participants
- 1993—Commenced outreach effort to tribes, culminating in naming four tribal representatives to Commission
- 1994—Adopted quality assurance and control policy to make sure science and technical data was credible, defensible, accepted
- 1994—Challenged PAC to develop consensus recommendations

Lessons learned

- Large scale, consensus driven projects can succeed, if balanced, open, and inclusive and if conducted in credible, technically competent, evenhanded way
- Committed leadership is essential, for instance, to give stakeholders reasonable probabilities that their work will lead to changes
- Good communications practices are essential, both internal and external, in order to build and maintain trust and enthusiasm

Industry Perspectives: GCVTC Critical Success Factors

By Shawn B. Kendall, President and CEO, The Kendall Group, Inc.

GCVTC process issues

- Complex science
- High potential exposure of sources
- Passion to improve visibility

Three keys to success

- Technical input to policy debate was controlled by tech subcommittees
- Stakeholders established consensus criteria and assessment process
- Public advisory committee charged with developing a consensus recommendation with a deadline

Technical subcommittees controlled use of data
- Emissions Subcommittee
- Meteorology Subcommittee
- Modeling Subcommittee
- Aerosol and Visibility Subcommittee
- Qualified use of data to AAC and PAC

Evaluation criteria
- Visibility effects (in Class I areas)
- Economic effects
- Social effects
- Other environmental effects
- Equity
- Administrative ease and effectiveness

Overview of assessment process
- Regional population/economic forecast (through 2040)
- Sector response for demand/emission estimates
- Assessment of visibility and direct costs of scenario
- Evaluation of other secondary criteria
- Comparison of options/scenarios
- P.A.C. consensus recommendation

Emission management scenarios
- Bounding scenarios
- Baseline forecast scenario (current requirements)
- Maximum management alternative (total max controls)
- Intermediate management scenarios (IMSs)
- Regional emission cap/market trading
- Visual air quality objectives
- Control technology/standards

Public advisory committee consensus process
- 70+ members—balanced stakeholders
- Appointed by commissioners
- Extensive facilitated process to achieve common understanding of policy/technical background—2 years
- Drafting group used to develop final recommendations
- Charter established 95+ percent = consensus

Tribal Perspectives: Tribal Involvement in Making Recommendations for Improving Western Vistas

By Petuuche Gilbert, Tribal Councilman, Natural Resources Officer

Overview

The Grand Canyon Visibility Transport Commission (GCVTC) was established on November 13, 1991. It is comprised of the governors from Arizona, California, Colorado, New Mexico, Nevada, Oregon, Utah, and Wyoming. It includes leaders of the Navajo Nation, the Hopi Tribe, the Hualapai Tribe, and the Pueblo of Acoma. Only 4 tribes of 211 tribes in the visibility transport region were formally represented as tribes and as sovereign Indian nations. The scope of the commission was expanded to include additional Class I areas in the vicinity of the Grand Canyon National Park—which is sometimes referred to as the "Golden Circle" of parks and wilderness areas. This includes most of the national parks and national wilderness areas of the Colorado Plateau. The commission worked arduously to submit a report to the EPA by summer 1996.

The tribal commissioners were not represented on the commission from the beginning of the commission process, but were added to the commission beginning in 1994 with the Navajo Nation and the Hopi Tribe, followed by the Pueblo of Acoma, and finally in 1995 by the Hualapai Tribe and Columbia River Inter-Tribal Fish Commission (which was considered as a nonvoting member). The Acoma tribe was the only pueblo of the pueblos in New Mexico who aggressively pursued membership on the commission. As a result, Governor Reginald Pasqual was appointed by Carol Browner. Upon insistence by tribal representatives, the Hualapai Tribe and the Columbia River Inter-Tribal Fish Commission were added.

Tribal Representation

There are over 200 sovereign tribes in the states represented on the commission. However, only four tribes represented themselves. This caused some consternation among tribal staff involved in meetings. It was somehow construed by state and federal officials and private parties that these tribal people were representing all of the tribes in the transport commission region. It is important to emphasize that only four tribes were represented by their staff on the work of the commission. All tribal staff involved considered themselves as "tribal participants." As individual participants in the GCVTC process they joined together and reached consensus on a number of issues on behalf of all the tribes affected. This was a unique example of a small group of tribal participants coming to consensus with all stakeholders about protecting air quality in the western U.S.

Tribal Sovereignty and Co-management Principles

The Grand Canyon Visibility Transport Commission was composed of the governors of eight western states; four tribes were directly represented. Although the Columbia Inter-Tribal Fish Commission represented the position of many tribes under their organization they did not have a vote. The states and tribes held voting powers; however, the consensus decision-making process was used to recognize the views of all stakeholders. The commission was established to recommend methods to preserve and improve visibility on the Colorado Plateau. The GCTVC recognized and respected the government-to-governmental relationship and thus the consensus decision-making process was considered not only in terms of federal-state framework but most importantly, in terms of a federal-state-tribal framework. As the tribe asserted their position on tribal sovereignty in the final GCTVC final report:

> It is a basic principle of Indian law that tribes have inherent sovereignty over tribal lands, or 'Indian country.' Moreover, if a tribe does not assert its jurisdiction in a particular instance, then the federal government may have jurisdiction in the tribe's place, but a state government could not.

National Park Planning: Stewardship across Boundaries

Wednesday, May 17, 2000—10:15-11:45 a.m.

Moderator

Luther Propst, Rincon and Sonoran Institutes, Tucson, AZ

Panelist

Frank Walker, Saguaro National Park, Tucson, AZ

Panel Abstract

Perhaps the most pervasive and intractable threat to the long-term integrity of national park units and other protected areas is incompatible development of adjacent lands. This panel will discuss the conflicts between conservation and development that arise along the boundaries of public and private lands, and offer a collaborative approach to reconciling these conflicts. Public land management agencies are increasingly adopting a cross-boundary approach to protecting public lands, encouraging their stewards to manage along ecological rather than political or administrative boundaries. This broader approach, often referred to as a component of "ecosystem management," acknowledges the limitations of managing solely within current borders and instead advocates promoting stewardship across boundaries. Panelists will report on this collaborative approach to reconciling conservation and community development at Saguaro National Park.

Individual Papers

Partnerships across Park Boundaries:
The Rincon Institute and Saguaro National Park
By Luther Propst, Bill Paleck, and Liz Rosan

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Partnerships across Park Boundaries: The Rincon Institute and Saguaro National Park

By Luther Propst, Bill Paleck, and Liz Rosan

Final draft of chapter to be published in *Stewardship Across Boundaries,* edited by Richard Knight and Peter Landres, Island Press, Washington, D.C., in press

Perhaps the most pervasive and intractable threat to the long-term integrity of national park units and other protected areas is incompatible development of adjacent lands. Boundary pressures are greatest in settings like Shenandoah National Park, where private lands border 90 percent of the park's 566-kilometer (345-mile) boundary. In 1982, approximately 10 percent of the boundary was occupied by residential development; by 1992, this figure had risen to nearly 40percent, transforming the park into an isolated habitat island (Davis 1992). As Shenandoah tries to deal with immediate threats to wildlife habitat and view sheds from housing construction ringing its boundaries, opposition to potential expansion of the park has grown among neighboring landowners. This antagonism stems from historical fears that the National Park Service (NPS) may condemn private land, and from a more realistic concern regarding the fiscal impact of removing donated or acquired land from the local tax rolls (Fordney 1996).

Public land and resource managers increasingly point to declining ecological conditions within their jurisdictional boundaries: isolation of wildlife habitat and populations, invasion of exotic plants and animals, degradation of historic and cultural sites, and declining air and water quality. To understand the cause and scope of these resource-related problems, the U.S. General Accounting Office conducted a survey of NPS superintendents, who reported that 85 percent of parks experience threats from sources outside their boundaries (U.S. General Accounting Office 1994).

Urbanization along the borders of protected areas that is not carefully planned affects natural processes in ways both striking and subtle. Residential subdivisions around natural areas, for example, isolate wildlife habitat and sever migratory and travel corridors, creating fragmented habitat "islands" that are too small to guarantee the long-term maintenance of species diversity. A study examining 14 North American national parks reveals the extent of this trend: post-establishment extirpations occurred in all but the Banff-Jasper-Yoho Park complex in Canada (Newmark 1987). This study confirms what the Leopold Committee, an advisory board which influenced basic park management philosophy, concluded as early as 1962: "Few of the world's parks are large enough to be self-regulatory ecological units" (Leopold *et al.* 1963).

Native flora and fauna are also threatened by invasion of exotic plants and animals introduced by nearby development. Competition from introduced plant species, particularly those closely associated with disturbance, often plays a major role in the extinction of native species (Bowers and Turner 1985; Rondeau *et al.* 1992). The relationship between development and exotic bird species such as the European starling (Sturnus vulgaris) and the house sparrow (Passer domesticus) is well established; as the number

of houses and large turf areas (grass lawns, golf courses, etc.) increases, so does the presence of exotic birds (Mills *et al.* 1989; Bibles and Mannan 1992). These species may then outcompete and displace native avifauna. Competition with European starlings for nest sites has contributed to the decline of native species throughout the U.S. (Yoakum et al. 1980).

The traditional response to protecting nationally significant resources from imminent adjacent development has relied heavily on federal acquisition. In 1988 Manassas National Military Park, for example, acquired a 219-hectare (542-acre) parcel to prevent the development of Stuart's Hill, the site of Robert E. Lee's battlefield headquarters during the second Battle of Manassas. This protection, however, came at great cost. The park acquired the parcel only after the public became outraged by county approval of a 1.2 million square-foot regional mall and 560 residential units, thus costing the public $118 million for land that was purchased for $11 million two years earlier. This price tag was more than twice the amount the NPS spent on all other land acquisitions that year (Stone 1989).

In search of new approaches and prevent or resolve cross-boundary controversies, The Conservation Foundation (1985) published a seminal study entitled "National Parks for a New Generation: Visions, Realities, Prospects." The most promising approach to such challenges, it concluded, is to devise protective measures tailor-made for the unique local circumstances surrounding each park, rather than following a uniform, nation-wide methodology. The report called for creating "diverse cooperative mechanisms involving landowners and local governments in ways that reflect the needs and aspirations of adjacent communities." Lastly, the report recommended that such mechanisms are likely to be more effective if they involve strong local constituencies that recognize the contribution that national parks make to local quality of life.

Public land management agencies are increasingly adopting this important cross-boundary approach to park protection, encouraging their stewards to "manage along ecological rather than political or administrative boundaries." This broader approach—often referred to as a component of "ecosystem management"—acknowledges the limitations of managing solely within current borders, and instead advocates promoting stewardship across boundaries, thereby "ensur[ing] the sustainable long-term use of natural resources…and prevent[ing] future ecological and economic conflicts from becoming intractable" (U.S. General Accounting Office 1994).

Ecosystem management demands what experts in community-based conservation describe as: "a new matrix of expectations and relationships—to include both rights and responsibilities, accountability as well as trust, long-term patience, equitable partnership, flexibility, a more enlightened apportioning of costs and benefits, a vision of nature from which humans are inextricable, and a seamless linkage between conservation efforts and community development" (Liz Claiborne and Art Ortenberg Foundation 1993).

To make such lofty goals real, the NPS is striving to include the human component in resource protection. The NPS 1988 Management Policies stresses that the key to

fulfilling their stewardship obligations depends on working collaboratively with adjacent communities to promote improved communication, planning, and education.

Already a number of promising partnerships have formed involving public land managers and adjacent communities across the country. In many cases, what initially appears to be an irreconcilable conflict turns into a productive alliance where the participants strive to achieve common goals. A 1995 University of Michigan study of 105 ecosystem management efforts around the U.S. noted that collaboration among public land managers and neighboring communities was the most commonly reported factor facilitating successful initiatives (Yaffee *et al.* 1995).

Our chapter features an example of this collaborative approach to reconciling conservation and community development situated at Saguaro National Park[1] on the outskirts of Tucson, Arizona.

Tucson's Sprawling Growth Ignites Controversy over Threats to Saguaro National Park

The two units of Saguaro National Park sit on the east and west sides of the Tucson Basin like mountainous bookends struggling to contain the city's 48 square kilometers (30 square miles) of urban sprawl. Named after the majestic saguaro cactus (Carnegiea gigantea), the symbol of the American Southwest, this park protects 36,960 hectares (91,327 acres) of lush Sonoran Desert vegetation and the "sky islands" of the Rincon Mountains, including 28,895 hectares (71,400 acres) of legislatively designated wilderness.

Although considered the most lush and diverse of North American deserts, the Sonoran Desert receives less than 31 centimeters (12 inches) of rainfall a year. Annual rainfall in Saguaro National Park increases substantially as the Rincon Mountains rise from 665 meters (2,180 feet) to 2,641 meters (8,666 feet), averaging 102 centimeters (40 inches) at elevations above 2,438 meters (8,000 feet). These elevation changes in the park provide for six distinct biotic communities: desert scrub, desert grassland, oak woodland, pine-oak woodland, pine forest, and mixed conifer forest. This diverse landscape is home to common desert dwellers, including javelina (Tayassu tajacu), gila monsters (Heloderma suspectum), western diamondback rattlesnakes (Crotalus atrox), coyotes (Canis latrans), bobcats (Felis rufus), black bears (Ursus americanus), mountain lions (Felis concolor), gila woodpeckers (Melanerpes uropyqialis), red-tailed hawks (Buteo jamaicenis), and mule deer (Odocoileus hemionus). Petroglyphs remind visitors that the Hohokam people, part of the Chichimeca culture, once occupied this region. Archaeologists remain uncertain about the meanings of these petroglyphs, but consider these indigenous people innovators of prehistoric desert farming based on extensive networks of irrigation canals. With a growing national population interested in natural and cultural history and outdoor recreational activities, Saguaro National Park, like other protected natural areas, has experienced a surge in visitation over the past five years, skyrocketing from two to three million visitors annually.

[1] Congress redesignated Saguaro National Monument as Saguaro National Park in 1994.

When the Rincon Mountain District of Saguaro National Park was established in 1933, it stood as an isolated wilderness situated 19 kilometers (12 miles) from Tucson's urban boundary. Since then, particularly in the past four decades, Tucson has experienced rapid growth averaging 2.8 percent annually, almost twice the national average. The population in Pima County has doubled since 1970, reaching over 700,000 today, and is expected to double again in the next 24 years (Pima Association of Governments 1994). Embracing classic patterns of sunbelt sprawl, this growth has pushed development to the park's very boundaries and redefined it as a suburban wilderness. Unplanned sprawl is also eroding the natural and ecological integrity of the other protected sky island mountains adjacent to the city, including Coronado National Forest, Tucson Mountain Park, and Tortolita Mountain Park.

Since 1985 local officials have approved the construction of six major high-end resort and residential communities in the scenic foothills adjoining the city's pristine mountain backdrop. Ironically, the growing demand for resort, residential, and commercial development in these natural settings is threatening the very reason people are attracted here in the first place. In many cases, the development of property adjacent to park and forest trailheads has eliminated or severely restricted access to popular recreational trails. At the same time, the residents of new subdivisions near large natural areas have created their own paths into the desert and foothills. This not only expands disturbance and impacts, but can also lead to a confusing and destructive mish-mash of intertwined, overlapping, and parallel "rogue" trails.

Development pressure in sensitive natural areas is likely to continue given Tucson's projected rise in population and urbanization over the next few decades, and increased interest and mobility among Americans to flee their congested suburbs and live next to protected lands. As a leading Tucson developer points out, "From a market perspective, land adjoining Saguaro National Park is the closest thing in southern Arizona to ocean-front property."

As in so many other western cities grappling with rapid growth, Tucson's expansion has stirred great controversy. In the mid 1980s, Tucsonans were particularly troubled by the "cookie cutter" tract developments stamped over large expanses of previously undisturbed desert uplands, and the rapid conversion of tree-lined arroyos to concrete-lined flood control channels. With local elected officials largely supportive of growth and limited funds for public acquisition of significant buffer lands, concerned citizens worked with Saguaro National Park Superintendent Rob Arnberger to develop a regulatory approach that would mitigate the impacts of development adjacent to protected lands.

The state of Arizona imposed a moratorium on any rezoning within 1.6 kilometers (1 mile) of Saguaro National Park while legislators studied the issue. During this time, a citizen-generated referendum to make this temporary moratorium permanent readily secured sufficient signatures to appear in the next election, but was ruled unconstitutional by the state supreme court. The state eventually passed legislation which eliminated the ability of local jurisdictions to instantaneously approve rezonings by invoking governmental "emergency" powers—a practice which had become routine in Tucson. The arena for continuing this debate then shifted from the state level to the local level.

Sobered by the near loss of local zoning control through referendum and examination by state legislators, Pima County appointed a diverse group of local developers, environmental activists, biologists, realtors, and agency officials to prepare a zoning ordinance to encourage more ecologically sensitive development near the protected areas of the Tucson Basin. After nearly two years of investigation, debate, and compromise, their efforts resulted in a proposal that came to be known by its unfortunate acronym, BOZO: the Buffer Overlay Zone Ordinance. BOZO addressed a wide variety of concerns including prohibited and recommended landscape plant species; night lighting and sunlight reflective standards; minimum percentage of open space; riparian habitat protection; and minimum setbacks from the boundaries of the protected natural areas. Throughout the community, BOZO was hotly debated. Some argued that it went too far, while others maintained that it failed to secure long-term protection of the integrity and character of the Tucson Basin and its quality of life. Eventually, in June 1988, a paper tiger version of this ordinance was approved.

Rather than providing any meaningful protection for park ecosystems and any certainty for landowners, the compromise on BOZO only heightened the conflict and polarization over development adjacent to sensitive desert lands. Following this effort, a vocal and frustrated anti-growth constituency emerged to challenge new development proposals in the Tucson Basin.

The Rincon Institute: A New Approach to Conservation Becomes a Reality

Nowhere in the Tucson Basin did the polarized debate over development play out more contentiously than in the review of the Rocking K Ranch, a proposed large-scale resort development sharing an eight-kilometer boundary with the Rincon Mountain District of Saguaro National Park east of Tucson. What resulted, however, was not the usual bitter compromise. Instead, the landowner, NPS officials, local and national conservationists, and the county formed a unique partnership to ensure that the new development integrated a high level of environmental sensitivity with respect to adjacent natural and cultural resources.

In a climate of failed expectations following the BOZO ordinance, prominent Tucson investors and land developers presented the 2,428-hectare (6,000-acre) Rocking K Ranch for rezoning to the Pima County Board of Supervisors. With picketers standing outside closed hearing doors and rumors of a bomb threat, the Rocking K Ranch became the most controversial development proposal in Pima County's history. The proposed plan included a resort and residential development, complete with 21,000-units, four resorts, 243 hectares (600 acres) of commercial space, and three golf courses that would support a new community of over 50,000 in the Rincon Valley. This proposal raised serious concerns, threatening to transform this rural valley into a new suburb of Tucson, and directly compromising the park's ecological and scenic integrity. Surprised by the intensity of the debate sparked by the proposal, the Rocking K Development Company withdrew their initial specific plan from consideration.

As a native of Tucson, Bill Paleck, new Superintendent of Saguaro National Park, had watched the Old Pueblo rapidly become a sprawling urban metropolis with few measures to protect outlying public lands. What he most feared was the prospect of settling for another county-approved development without any long-term environmental safeguards to preserve the park's resources. Among the many resources Superintendent Paleck saw threatened were:

1. Riparian Habitat
Large areas of impervious surfaces (created primarily by roads and parking areas) increase water runoff and invariably lead to the channelization of stream beds. The resultant loss of riparian habitat negatively impacts a majority of the Sonoran Desert's wildlife species, who frequently visit or live in riparian areas during at least part of their life cycles. In addition, a variety of threatened and endangered wildlife species depend on this critical habitat for their survival (Ohmart and Zisner 1993).

2. Desert Tortoise
Construction of sprawling residential development and its attendant infrastructure often destroys the habitat of the protected desert tortoise (Gopherus latrans). Subsequent disturbance and handling of the survivors by curious residents can stress these reclusive animals, thereby reducing their resistance to disease and illness. People also illegally remove tortoises from the wild to keep as pets.

3. Mule Deer
Interruption of, or barriers to, movement along the threads of riparian habitat which issue from the mountain reaches and intertwine on the valley floor can have devastating effects upon mule deer (Odocoileus hemionus). Deer travel up and down these corridors to access water, forage, and bedding areas during the critical dry period before the arrival of the summer monsoon rains. When they give birth, does use riparian corridors to move to higher elevations away from predators on the valley floor. During periods of great natural stress, blockage of these corridors by fences and harassment from domestic dogs running at large invariably result in lowered fawn survival rates and increased adult mortality.

4. Scenic and "Night Sky" Views
Architecture that clashes with surrounding landforms and traditional building materials and designs; highly reflective surfaces that glisten and shine distractingly; and exterior lighting that reduces the luster of the natural "night sky" can individually and cumulatively diminish the scenic quality of the Sonoran Desert landscape, which is highly valued by many residents, recreationists, and visitors.

Superintendent Paleck was determined to continue the efforts of his predecessor and committed himself to making development in the Rincon Valley support a more ecologically benign community. To better understand the potential impacts of the proposed Rocking K Ranch development and the feasibility of alternative land uses, he approached two national conservation organizations with extensive experience in reconcil-

ing development and land protection: World Wildlife Fund & The Conservation Foundation[2] (WWF), and the National Parks & Conservation Association (NPCA). These organizations evaluated several factors for Paleck to consider in response to the Rocking K Ranch development proposal: (1) Rocking K's water rights; (2) the property's ownership and financing; (3) metropolitan growth trends and projections for eastern Pima County; (4) the history of development review in Pima County; and (5) the history of judicial review of local land-use decisions. What they concluded was that county approval and successful development of the site was almost inevitable.

First and foremost, the probability of the Rocking K Ranch's owners (Rocking K) abandoning the project or declaring bankruptcy—a common occurrence in the late 1980s—was remote. In the mid-1970s, experienced investors and land developers had purchased the ranch with the intention of developing an exclusive, high-end resort. Land records revealed that there was no mortgage-backed debt on the property; consequently, Rocking K would not be financially crippled by delays in the development review process, allowing them to view this as a long-term project.

Second, the value of the property had appreciated considerably since acquisition. Rocking K was thus even more inclined to weather delays in developing the ranch since selling it would result in a substantial capital gains tax.

Third, adequate water for the project had already been secured. According to the Arizona Department of Water Resources, the Rocking K Ranch had an adequate supply of on-site groundwater—approximately 5 million cubic meters (4,400 acre-feet) annual supply—for the next 100 years. In addition, Rocking K had obtained water rights to a 4 million cubic meter (3,027 acre-feet) annual supply from the Colorado River through the Central Arizona Project (CAP), providing the development with twice the amount of water needed to supply the projected population.

Fourth, given population trends, sharp reductions in congressional funding for park acquisition, and pro-growth county land-use ordinances and court rulings, development over the next 25 years in the Rincon Valley appeared imminent. Moreover, no major development proposals in the past two decades in Pima County had been defeated.

Fifth, the option to protect the park's resources through the traditional land acquisition approach appeared infeasible: a large portion of the Rocking K Ranch did not merit national park status and protection; Congress had never appropriated funds to acquire park additions in Arizona; funds appropriated by Congress from the Land and Water Conservation Fund had dropped off precipitously; and the Arizona delegation would not support acquisition without the developer's approval.

Based upon this comprehensive land-use analysis, Superintendent Paleck concluded that the Rocking K Ranch proposal in some form would almost certainly gain local approval. He also reasoned that a successful national campaign to oppose Rocking K would at best result in the type of unplanned development that already characterized lands adjoining the Tucson Mountain District of Saguaro National Park—development

[2]WWF subsequently absorbed The Conservation Foundation in 1990.

that was both ecologically incompatible with park values and fiscally draining for local taxpayers.

Given these circumstances, WWF and NPCA recommended that the park most likely stood to gain from a cooperative partnership with Rocking K. To ensure the protection of the park's desert ecosystems and the quality of the visitors' experience, Paleck concluded that a proposed master-planned development with significant environmental measures would be less intrusive and damaging than the incremental, piecemeal subdivision occurring elsewhere in the Tucson Basin. Over the next ten months, the NPS worked with Rocking K and a variety of local leaders to craft a mutually acceptable plan that included provisions for the park's protection as an integral element of the development proposal for the Rocking K Ranch.

At the top of Superintendent Paleck's list was ensuring that the site design and planning would not fragment migratory routes and create isolated wildlife habitat islands too small to support biological diversity. He particularly wanted the positive attributes of limiting development to carefully designed clusters to be considered. This planning approach reduces the extent of disturbance, not only of the building footprints themselves, but also of the network of road, water, power and sewer infrastructure required. It reduces the area of impervious surfaces, and can provide opportunities to deal with water runoff in ways that do not lead to stream channelization and riparian habitat degradation. In addition, visual intrusions can be more easily mitigated and the extent and nature of exotic decorative plantings can be substantially reduced.

To evaluate the regional impacts of the proposed development, Superintendent Paleck recruited the chair of the University of Arizona's department of wildlife biology to map critical habitat and wildlife corridors in the park and on the Rocking K Ranch. Extensive wildlife, vegetation, and hydrology studies were conducted and a prime resource area was identified that included about 809 hectares (2,000 acres) on the ranch. These studies revealed that limiting the overall density of the development alone would not provide adequate wildlife habitat protection (Shaw *et al.* 1992). The development also needed an environmentally sensitive plan that integrated wildlife corridors. Fortunately, the scale of the Rocking K Ranch development could accommodate this type of carefully planned site design.

National Parks & Conservation Association argued that these wildlife protection measures should be coupled with public acquisition of the critical habitat identified on the Rocking K Ranch. Rocking K Development Company agreed to sell the NPS 95 percent of the area that had been identified as prime wildlife habitat. They would not, however, sell the resort site at the edge of this critical area, since its dramatic location was essential for a successful resort project.

While these site planning provisions were crucial, Superintendent Paleck knew that alone they were insufficient to adequately protect Saguaro's long-term ecological integrity from regional growth pressures. The challenge was how to ensure stewardship of environmental values, not just in the short term, but through a succession of

homeowners over the next several decades. This was a particularly relevant concern considering that the transient urban population of Tucson "rolled over" every 7.5 years. Paleck feared merely token commitments from the developer to educate residents about wildlife and ecosystem stewardship.

In one recent Tucson development, for example, initial buyers of lots adjoining critical wildlife habitat received a notebook about wildlife protection and a figurine of a bighorn sheep family for their mantelpiece. These measures were designed to verse the new residents in habitat protection needs. Subsequent homeowners, however, never received further information. With such a cursory and short-term commitment invested in its residents, it was clear that this community's conservation ethic would not be sustained. To prevent this kind of superficial environmental stewardship, Paleck wanted long-term, built-in guarantees from the developer to enhance the development's conservation commitments and to protect park resources.

With these considerations in mind, the NPS, Rocking K Development Company, and conservation leaders proposed to create the Rincon Institute—a new, independent, nonprofit conservation organization whose mission would be to help protect the natural resources of Saguaro National Park and adjoining lands. A diverse board of directors was recruited to ensure that the Rincon Institute incorporated sound policy and science into its activities. To guarantee representation from key actors in this partnership, the Superintendent of Saguaro National Park, the director of Pima County Parks and Recreation Department, and the president of Rocking K Development Company would serve as board members in a nonvoting and *ex officio* capacity.

The Rincon Institute would enter into a long-term funding agreement with Rocking K to provide four major conservation priorities:

1. Manage approximately 182 hectares (450 acres) of natural open space within the Rocking K Ranch for educational, scientific, conservation, and outdoor recreational purposes;
2. Provide environmental education in partnership with the NPS for students, residents, guests, employees, builders, realtors, and the greater Rincon Valley;
3. Conduct long-term ecological research on wildlife habitat, plant salvage, and riparian restoration; and
4. Provide professional guidance and oversight on environmentally sensitive development, management and restoration strategies for the Rocking K Ranch and landowners in the Rincon Valley.

What distinguished the Rincon Institute from other conservation approaches was its pioneering partnership with the Rocking K Ranch; the development process would generate long-term funds for the institute's conservation activities. As a condition of local approval, the Rocking K Development Company agreed to impose deed restrictions binding all future homeowners and businesses to financially support the Rincon Institute's conservation programs. The restrictions include nightly surcharges on hotel rooms, occupancy fees on commercial and retail outlets on the site, monthly fees assessed to homeowners, and real estate transfer fees that apply to both initial convey-

ances and resales. Under this agreement, the nightly surcharge from a proposed 400-room hotel, for example, would generate approximately $50,000 per year (50 cents per guest per night). When fully built out, the development anticipated generating between $200,000 to $300,000 a year for resource conservation adjacent to Saguaro National Park.

After months of negotiations, the NPS and Rocking K Development Company finally agreed to the following four key provisions to protect the park's fragile ecosystems. Rocking K Development Company would:

1. Sell 95 percent of the ranch's most significant wildlife habitat—about 809 hectares (2,000 acres) in all—to the NPS when the boundary of the park was legislatively expanded. (In addition, the NPS eventually agreed to purchase another 648 hectares (1,600 acres) of neighboring ranch lands.)
2. Restore critical riparian habitat along a four-kilometer (2.5 mile) stretch of Rincon Creek, a major drainage in the Tucson Basin which issues from the park and had been severely degraded by decades of groundwater mining, cattle grazing, and farming. Given that desert riparian environments provide as much as ten times more productive wildlife habitat than do desert uplands, this restoration—with an estimated cost of six to eight million dollars—is critical to the Rincon Valley's wildlife.
3. Reduce the total number of homes from 21,000 to 10,000 units and cluster the development sites. This revised plan would support 24,000 new residents and preserve one-half the site as open space in a system of integrated wildlife corridors, and 24 kilometers (15 miles) of public hiking and equestrian trails into the park.[3]
4. Create and fund the Rincon Institute[4] to ensure long-term monitoring, compliance, and implementation of environmental commitments. County development approval mandated the Institute's funding, thereby ensuring the organization's financial autonomy.

More than a year later in December 1990, Rocking K Development Company presented its revised proposal to Pima County supervisors. With supervisors aware of the importance of including these environmental mitigation measures, Pima County approved the new specific plan for the Rocking K Ranch. The reality of the situation was characterized by a supervisor in a public statement: "In the world of real choices, this plan represents a dramatic departure from past practices of unplanned sprawl and spot

[3] In July 1996 Rocking K Development Company entered a joint venture partnership with Lowe Development Resorts of Santa Barbara, California, and agreed to further reduce the total number units to 6,500 and eliminate one major resort.

[4] The Rincon Institute is structured as a 509(a) support organization for the Sonoran Institute, which was founded at the same time in 1991. This arrangement ensures tax-exempt status and deductible donations even though a substantial portion of its budget comes from a single source. The Sonoran Institute was created to promote community-based strategies that preserve the ecological integrity of protected lands, and at the same time meet the economic aspirations of adjoining landowners and communities. Underlying the Sonoran Institute's mission is the conviction that community-driven and inclusive approaches to conservation produce the most effective results.
In summer 1996 the Rincon Institute and the Rocking K Development Company renegotiated to increase long-term funding and to simplify financial administration.

zoning. Our challenge now is to assure that all future development conforms to these high standards."

Despite these unprecedented elements in a county-approved development plan, public skepticism remained strong. During the year-long approval process, the Rincon Valley Coalition, a citizens group opposed to the Rocking K plan, had staunchly contested any development of the ranch other than .4-hectare (one-acre) and 1.2-hectare (three-acre) lots, refusing to discuss alternatives with Rocking K or Saguaro National Park. Accordingly, the coalition viewed Paleck as a turncoat and the Rincon Institute as nothing more than a clever ploy to gain development approval without an authentic environmental commitment to the valley.

Following county approval, the Rincon Valley Coalition organized a petition drive to force a referendum, hoping to overturn the county's decision by popular vote. As WWF and NPCA had pointed out earlier, Arizona courts tightly enforce technical rules governing the referendum process when used to overturn site-specific zoning decisions. True to tradition, the courts disallowed the petition drive for failing to submit an adequate number of valid signatures. Consequently, the issue never appeared on the ballot as a referendum question.

Fostering Stewardship at Saguaro National Park and the Rincon Valley

In 1991, its first year, the Rincon Institute initiated a range of conservation activities designed to protect wildlife habitat and to assess the potential impacts of developments on natural resources in Saguaro National Park, the Rocking K, and throughout the Rincon Valley. Most notably, the Institute spearheaded a coalition of organizations that convinced Congress to add nearly 1,619 hectares (4,000 acres) to the Rincon Mountain District of Saguaro National Park. With continued support from these local organizations, the institute helped add another 1,416 hectares (3,500 acres) to the Tucson Mountain District and redesignate Saguaro National Monument as a National Park in 1994.

By attracting a diverse and professional board of directors from the Tucson community, the Rincon Institute has built a strong constituency among private landowners in the Rincon Valley, federal and state agencies, and a variety of other public and private organizations. Over the past five years, the Rincon Institute has specialized in conservation research, land protection, landowner outreach efforts, and environmental education at Saguaro National Park, the Rincon Valley, and the Tucson Basin.

Conservation Research and Land Management Program

In partnership with Saguaro National Park, University of Arizona, U.S. Geological Survey, and Harris Environmental, Inc., the Rincon Institute completed a two-year inventory of wildlife populations and riparian habitat on the Rocking K Ranch, Saguaro National Park, and the Rincon Valley. Amphibians, small mammals, reptiles, and birds were inventoried as part of a long-term wildlife monitoring effort to assess potential pressures on these populations. The riparian habitat inventories documented data on biotic

(streamside vegetation communities) and abiotic (groundwater, streamflow, and channel morphology) components of riparian ecosystems at four permanent study sites along an 13-kilometer (eight-mile) stretch of the Rincon Creek. These inventories will serve as the basis for long-term monitoring of the area's natural resources and increase empirical understanding of how development and urbanization affects protected natural areas as well as how these impacts can be minimized (Briggs *et al.* 1996).

The Rincon Institute is also responsible for developing a comprehensive restoration plan for the four-kilometer (two-and-a-half-mile) reach of Rincon Creek that winds through the ranch. To help guide these restoration efforts, the Institute evaluated the results of many conservation and rehabilitation efforts throughout Arizona. An early result of this effort was the publication of Riparian Ecosystem Recovery in Arid Lands: Strategies and References (University of Arizona 1996). This guidebook targets resource managers, biologists, hydrologists, government planners, and concerned citizens interested in developing site-specific recovery plans for damaged riparian areas in the southwestern U.S. and northwestern Mexico.

As part of the Rocking K Ranch's comprehensive land management plan, the Rincon Institute will manage approximately 182 hectares (450 acres) of natural open space and trails within the ranch and coordinate conservation activities and needs with the park. To protect transboundary wildlife corridors, Saguaro National Park will develop the design and construction criteria for the 24-kilometer (15-mile) public trails system within Rocking K in partnership with the developer and Pima County. When the development breaks ground in late 1997 or 1998, the institute will initiate a plant salvage operation to reduce the impacts of development on biodiversity in the valley and encourage volunteer participation in habitat restoration and maintenance projects.

Natural Area Protection and Outreach Program

To mitigate the impacts of adjacent development to Saguaro National Park, the Rincon Institute is promoting conservation approaches that include public land acquisition measures as well as expanded private conservation options for landowners.

In 1992 Saguaro National Park and the institute sponsored a conference at which more than 100 Tucsonans—from builders and developers to environmentalists and government officials—identified collaborative ways to reconcile conservation and development. As a direct result of this conference, the Institute spearheaded the formation of a citizens committee for open space and parks to identify and prioritize critical natural areas in Pima County that should be saved from development. With increasing pressure to develop near protected natural areas, this committee is working with the Citizens Bond Advisory Committee and the Pima County Parks and Recreation Department to coordinate a $31 million bond referendum to acquire the most sensitive and scenic natural areas in the Tucson Basin. Working closely with the county, the Institute also intends to create a mechanism that will offer developers incentives to cluster housing and preserve open space in all new development.

With decreasing funding for public land acquisition, the institute is also working with landowners in the Rincon Valley and along the adjoining upper Tanque Verde Creek to develop and implement landowner-based strategies to protect this area's desert riparian ecosystems. The Partnership for Riparian Conservation in Northeastern Pima County (PROPIMA) addresses the need to preserve privately-owned riparian habitats in a manner that protects private property rights and promotes citizen stewardship. Thus far, the institute has helped secure one conservation easement on private property along the Tanque Verde Creek in support of this effort.

Environmental Education Program

The institute's environmental education programs emphasize increasing understanding of desert ecosystems while instilling a high level of environmental awareness among participants. Fundamental to these programs is conveying the message that stewardship of the area does not begin or end at park boundaries. Rather, the long-term integrity of the park will depend in large part on the stewardship role of Rincon Valley residents.

Targeting elementary school students, the Institute and teachers in the Vail School District developed a program called Parks as Classrooms to take students out of the classroom and into Saguaro National Park to learn about the habitat needs of wildlife and the importance of conservation in a fragile desert environment. To involve the community in this project, the school district initiated a docent training program for Parks as Classrooms in cooperation with Saguaro National Park and the institute.

Long-term environmental education plans include building an environmental education center adjacent to Saguaro National Park that will incorporate classrooms, research and exhibit space, and outdoor interpretive trails. This center will provide comprehensive environmental education and natural and cultural history programs geared for residents, guests, employees, and students. In addition, the Institute will develop an education program to help homeowners build environmentally sensitive and energy-efficient designs in the new community. Homeowners will also learn about their rights and responsibilities related to natural resource protection of the development and adjacent park as established in the deed restrictions.

Sources of Support

This innovative blend of conservation and development has attracted support from a range of foundations, individuals, and state and federal conservation agencies. The institute has secured major project funding from Arizona Game and Fish Department, Arizona Water Protection Fund, ARCO Foundation, National Fish and Wildlife Foundation, National Parks Foundation, and World Wildlife Fund. In 1995, the National Park Foundation and the U.S. Department of the Interior awarded Saguaro National Park and the Rincon Institute the prestigious National Park Partnership Leadership Award in recognition of their collaborative programs.

Reflections on Cross-boundary Solutions

Win-win solutions are now being crafted across the country to enhance long-term protection of park resources and enrich local quality of life and economic vitality. Independent of formal theories, standard practices, or traditional conventions, developers have established similar nonprofit organizations as integral and permanent conservation elements of new communities bordering protected areas. These organizations are playing an important role addressing local land development and conservation issues while reducing polarization and providing new methods for financing conservation efforts in an era of public funding cutbacks. This unconventional approach to financing conservation has emerged in several diverse markets including Arizona, California, Florida, South Carolina, and Washington.

This emerging trend of forging collaborative solutions that integrate conservation with development will continue to gather momentum as more Americans choose to live adjacent to national parks or other areas with significant natural amenities. As part of this trend, an increasing number of home buyers are willing to pay a premium for development projects that demonstrate an authentic long-term commitment to environmental quality. To capture this growing market niche, developers are creatively responding with approaches like the Rincon Institute that make this lasting promise to conservation. Moreover, from a market standpoint, protecting these natural assets clearly adds value to their real estate investments, helps earn broad local support, and reduces the need for governmental mandates.

Organizations like the Rincon Institute invest new communities with a conservation ethic before the first spadeful of soil is turned for construction and long after the developers leave. This model demonstrates some clear advantages over earlier organizational models that own and manage common open space, including a local government authority (such as county or municipal parks or schools), or a homeowners association. These approaches to land protection often meet with initial success. However, as time passes and competing priorities evolve, the commitment to natural open space tends to lose precedence and attention. Schools and parks often must choose between protecting riparian habitat and buying a new roof for the gymnasium. Homeowners associations must choose between spending funds to protect and maintain open space or replacing the community swimming pool pump. The Rincon Institute model, on the other hand, can avoid this difficult reality of choices by vesting responsibility in an independent, nonprofit third party with a secure source of income and a conservation focus.

As private lands neighboring our wild areas become increasingly urbanized, public land managers are recognizing the importance of solutions that address issues beyond their formal boundaries. In the past, Americans successfully preserved our cherished landscapes by setting aside more parks, forests, refuges, and wilderness areas. Natural resource managers can no longer rely upon isolation and federal laws to protect the integrity of these areas. International and now domestic experience teaches us that this jurisdictional boundary approach to ecosystem management and protection is inad-

equate to deal with the magnitude and complexity of air, habitat, and water systems, as well as neighboring urban issues of traffic, crime, increased infrastructure costs, water rights, and development controversies. In response to these challenges, federal land managers are working directly with local residents, developers, and county officials to develop conservation strategies that reflect and integrate the diverse needs of protected areas with those of adjacent landowners and communities. Without big picture, landscape level solutions, protected areas will become veritable islands in a rising sea of development.

Inevitably, we will need to search for new pragmatic and workable paradigms that manage growth in a sustainable manner while protecting local natural resources. The model described in this chapter cannot and should not reconcile all natural resource boundary conflicts. Rather, it represents one strategy among many for minimizing the impacts of development in cases where development bordering a protected area appears inevitable. Most notably, this approach demands a new way of thinking about the role of communities in relation to the natural environment, by placing resource stewardship in the hands of the new community.

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Implementing Collaborative Solutions for Flood Damage Reduction and Natural Resource Protection in the Red River of the North Basin

Wednesday, May 17, 2000—10:15-11:45 a.m.

Moderator

Michael J. Harty, CDR Associates, Boulder, CO

Panelists

Cheryl Miller, National Audubon Society, St. Paul, MN

Don Buckhout, Minnesota Department of Natural Resources

Donald Ogaard, Red River Watershed Management, Board, MN

Panel Abstract

Seven (now nine) watershed districts formed the Red River Watershed Management Board in 1976 for the purpose of funding flood damage reduction programs and projects. Numerous water control structures were funded and constructed prior to 1992. Flooding and soil erosion continued to plague the basin, however, and planning for additional projects continued. A joint environmental impact statement by the U.S. Army Corps of Engineers and Minnesota Department of Natural Resources led to litigation in the mid-90s and gridlock on efforts to permit projects. The Minnesota Legislature authorized mediation in 1997 to seek a resolution. Working with mediators from CDR Associates and the Red River Watershed Management Board, the Minnesota Department of Natural Resources jointly convened a work group of stakeholders to seek solutions to flood damage reduction and natural resource protection issues. After eight months of collaborative negotiations the work group reached an historic agreement in December 1998 that addressed broad goals, principles, and strategies for flood damage reduction, natural resource management goals, a comprehensive watershed planning process, and a project review and permitting process. Panelists will describe the overall process as well as specific challenges associated with reaching agreements that rely on interpretation and application of technical and scientific information.

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The Mediation Process: The Snake River Mediation—The Parties' Institutional Issues and Challenges

Wednesday, May 17, 2000—10:15-11:45 a.m.

Moderator

Joseph McMahon, Davis, Graham, and Stubbs, Denver, CO

Panelists

Andy Laurenzi, The Arizona Chapter of The Nature Conservancy, Tucson, AZ

Don B. Miller, Native American Rights Fund (NARF), Boulder, CO

Panel Abstract

This session includes a summary of "lessons learned" from two coal mining and power generation mediations, and a facilitated discussion about how party representatives can be assisted through a hypothetical water rights and ESA dispute. The hypothetical dispute is based on some of the water and environmental issues involving the Snake River water rights adjudication in Idaho and the Nez Perce water rights claims.

Panel Summary

Individual Papers

Guiding Institutions and Organizations through Mediation:
A Hypothetical Based on the Snake River Basin Adjudication in Idaho
By Joseph McMahon

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Panel Summary

This is a brief summary of the collective discussion of the role of the ADR guide, with the guide helping the institution in making key decisions about how or whether to participate.

Following is a list what participants mentioned as key considerations, issues, and challenges in guiding an institution or agency through a mediation such as this.

1. There is a tremendous complexity to the dispute we now face; although this is in the extreme, it involves a state adjudication that has Indian claims (congressional approval is required) and a vast complexity of downstream and interstate issues.
2. The sources of information and authority are widespread (there are a vast number of federal and state agencies who are not in place at the mediation).
3. Unholy alliances must come together to work on the issue.
4. There are tribal complaints that federal agencies ignore them; this results in Indian interests determining not to participate because they feel unheard. This can result in litigation.
5. Environmental groups may decide not to be involved, and this can affect the process. Is this a litigation strategy? Does this impede the prospects for ADR?
6. The scope of the dispute, mediation, and attendance:
   a. The challenge in a complex mediation where key players are not included.
      i. By court order, they are not parties to the dispute, or,
      ii. They are not included for political or scope issues. (COE or NMFS is not in Snake River mediation.)
   b. Principle: Who do we need to have present? From Indian Land Claim settlement, mediation should have all parties needed for a congressional resolution.
7. Participation: What about environmental organizations?
   a. They may not wish to participate due to success in court, or
   b. Are the environmental interests already represented? The environmental group has limited resources and does not commit to the mediation to save funds for other issues.
   c. They have limited resources and may feel that funds are better spent in court. (Earth Justice may wish to litigate while American Rivers and TU may want to mediate.)

Guiding Institutions and Organizations through Mediation: A Hypothetical Based on the Snake River Basin Adjudication in Idaho

By Joseph McMahon, Davis, Graham, and Stubbs, Denver, CO

This program is a facilitated discussion of the role of a mediation representative in guiding an institutional or organizational party through the issues and challenges presented in a hypothetical mediation. It asks the participants to take on the identity of the mediation guide for a party ordered to mediation, and to participate in a facilitated group discussion of the key issues and challenges facing the party. The parties are listed below. The program will set the scene, identify the players and then progress through preparation for and participation in a mediation of a part of the Snake River Basin Adjudication (SRBA) in Idaho. The program will "fast forward" from point to point in the mediation preparation and sessions to highlight the challenges presented to the person or persons who will "guide" the various parties through the process. The program is aimed at assisting those persons who serve the role of guide for institutions and organizations in the mediation and ADR.

In this process, we will consider, from the various party perspectives, the parties' concerns about:

- Should we even participate in this mediation? What does the court order require?
- How much energy do we put into this?
- What do we do to get ready for mediation?
- Who will be the mediator?
- How do we negotiate in the mediation?
- What problems are likely in the mediation?
- How much shall we tell the other side?
- How do we know if we are making progress?
- Will the other party try to take advantage of us?
- How to deal with the press and third parties?

The parties and the conflict: The conflict in this hypothetical centers on the SRBA in Idaho and the court ordered mediation of that conflict. In the context of that conflict, the parties listed below must consider, among other things, the questions listed above.

- Indian tribe
- State (speaking also for the city and port)
- Irrigators' coalition
- U.S.
- Power company
- Environmental coalition

The River Adjudication: You represent one of the parties or coalitions identified on above list. You are that party's "guide"—you will advise that party about the mediation

and how to participate in it. Idaho initiated the SRBA in 1987 to determine all rights of use to water in the Snake River Basin in Idaho (87 percent of the state). Initially projected to last 10 years, the adjudication is still in its early stages and is unlikely to be completed before 2015.

Instream flow: While the adjudication involves 150,000 claims filed by 100,000 claimants, the largest and most controversial claims are the instream flow claims filed by the U.S. and Nez Perce Tribe. The tribal claims are by far the largest of the instream flow claims and have the greatest potential to significantly affect future non-Indian development and existing water use patterns, particularly among irrigators and hydroelectric power producers.

Mediation: Mediation of the federal and tribal instream flow claims has been ordered.

Background Information on the Conflict and Parties

The Tribe's Claims

The tribe and the U.S. (as the tribe's trustee) have asserted an instream flow right to the natural (pre-dam) flow of the Snake River in Idaho with a priority date of either the 1855 federal treaty or time immemorial. The tribe and U.S. claim an implied federal reserved water right in support of an express 1855 treaty right to fish at usual and accustomed places off the reservation. The claims to water for fish and water for irrigation and power production are generally viewed as irreconcilable because the fish need the water flowing in the river at cool temperatures at the same time the farmers and power companies need to store or use it.

The only way an Indian water rights claim can be settled is through an act of Congress. Thus, any settlement resulting from mediation would have to be implemented by congressional act. Over the last 25 years, Congress has been active (off and on) in enacting consensual settlement agreements between the U.S., states and water users, and Indian tribes. Current federal policy strongly favors water rights settlements (as opposed to litigation) and the Clinton Administration is particularly eager to achieve some settlements because of its dismal record (compared to earlier administrations) in settling Indian water and land claims. The National Conference of State Legislatures, the National Governors' Association, and the National Association of Attorneys General have also adopted policies strongly favoring settlement of Indian water rights claims. The major stumbling block has been congressional willingness to fund these settlements, which typically run in the $30 million to $250 million range. Often, settlements can come together fairly quickly in presidential or senatorial election years.

In the SRBA, the Tribe's main objective is to secure a restored, harvestable anadromous fishery in Idaho. Salmon have been in decline for over a century, but since the completion of 4 large Army Corps power and navigation dams on the lower Snake River in the 1960s and 70s, all Idaho salmon and steelhead runs have gone extinct or been listed under the Endangered Species Act (ESA). The tribe and the U.S. (hereafter "tribe" when referring to the identical claims filed by both the tribe and U.S.) don't actually want

all the water as their claims would suggest, rather they want enough to restore and protect a harvestable anadromous fishery.

The Fishery

Scientists now understand that bigger, faster, cooler flows out of the Snake will help salmon by postponing extinction for perhaps an additional 5-10 years (to about 2020 or 2025). But if surviving Idaho runs are to recover, and if salmon throughout the Columbia Basin are to avoid extinction, the "fix" lies largely beyond Idaho's borders and the jurisdiction of the SRBA court. Specifically, the four lower Snake dams in southeast Washington will have to be removed (bypassed or breached) to reduce Idaho salmon's dam/reservoir-passage mortality. Other dams and reservoirs on the lower Columbia must be modified to improve passage and drawn down to reduce reservoir length and temperature. Throughout the Columbia Basin, land use practices will have to change dramatically and habitat will have to be restored and preserved. These are regional decisions affecting regional power rates that Idaho has limited ability to control or influence.

In the Pacific Northwest, intense "salmon wars" have been ongoing for over 20 years. In addition to all Idaho stocks, numerous other Columbia Basin stocks are ESA-listed (only 4 runs in the entire basin are classified as healthy). Environmentalists, Indian tribes, commercial and sports fishers, and state and federal fish and wildlife agencies have generally taken one side, while irrigators, extractive industries, development interests, and the federal power agencies (BPA, Army Corps of Engineers) have taken the other. It's been ugly.

Studies and Resolutions

Recent ESA-driven studies and near unanimous scientific opinion now recognize that operation of the hydropower/navigation system (continuous dams and warm, slow moving reservoirs from estuary to Lewiston, Idaho) is the major modern cause for Idaho salmon's latest, and perhaps final, precipitous decline.

While Idaho cannot control the regional decision-making process on salmon and power, it is nonetheless an important piece of the "regional fix" puzzle. Thus, any mediated SRBA settlement going before Congress will be subject to political influence by regional and national combatants in the fish wars and, perhaps, energy deregulation interests.

The National Marine Fisheries Service (NMFS) Dept. Of Commerce, with ESA enforcement responsibility for anadromous fish, has staked out the political middle, attempting to save salmon through upper-basin releases of stored irrigation water (flow augmentation) and technological means (e.g., barging fish around the dams to the ocean) without requiring any real sacrifice from more politically powerful lower-basin power producers and users. The result is that after spending $3 billion on salmon restoration in the last 20 years, the Pacific Northwest still has electric power rates 40 percent below the national average, but virtually all of its anadromous fish runs are extinct, endangered, or threatened.

NMFS must soon issue a new biological opinion setting forth its recovery plan for Idaho salmon and steelhead (scheduled for summer of 2000). The options under consideration are breaching the four Lower Snake dams or continuing the unsuccessful barging and dam improvement program of the last 20 years.

It is generally known that NMFS wants to double or triple the amount of Idaho water used to augment flows (currently at 427 kaf/yr.) if the dams remain in place.

If the four lower Snake River dams are breached, much less Idaho agricultural water will be needed for flow augmentation.

Regardless of what NMFS recommends, only Congress can authorize dam removal or breaching. With the exception of Oregon Gov. Kitzhauber, Pacific Northwest politicians (led by Sen. Slade Gorton) adamantly oppose dam breaching (including Idaho's governor and congressional delegation).

Idaho water interests, all of whom are party to the SRBA, seek relief not only from the federal and tribal water rights claims in the SRBA, but also from non-SRBA federal and environmental demands such as NMFS-imposed ESA requirements to release Idaho water that would otherwise be used for Idaho irrigation as well as Clean Water Act requirements. Idaho Power Company's FERC licenses for the Hells Canyon Complex expire in 2006. The company wants new licenses and the State of Idaho wants desperately to protect its lowest-in-the-nation power rates.

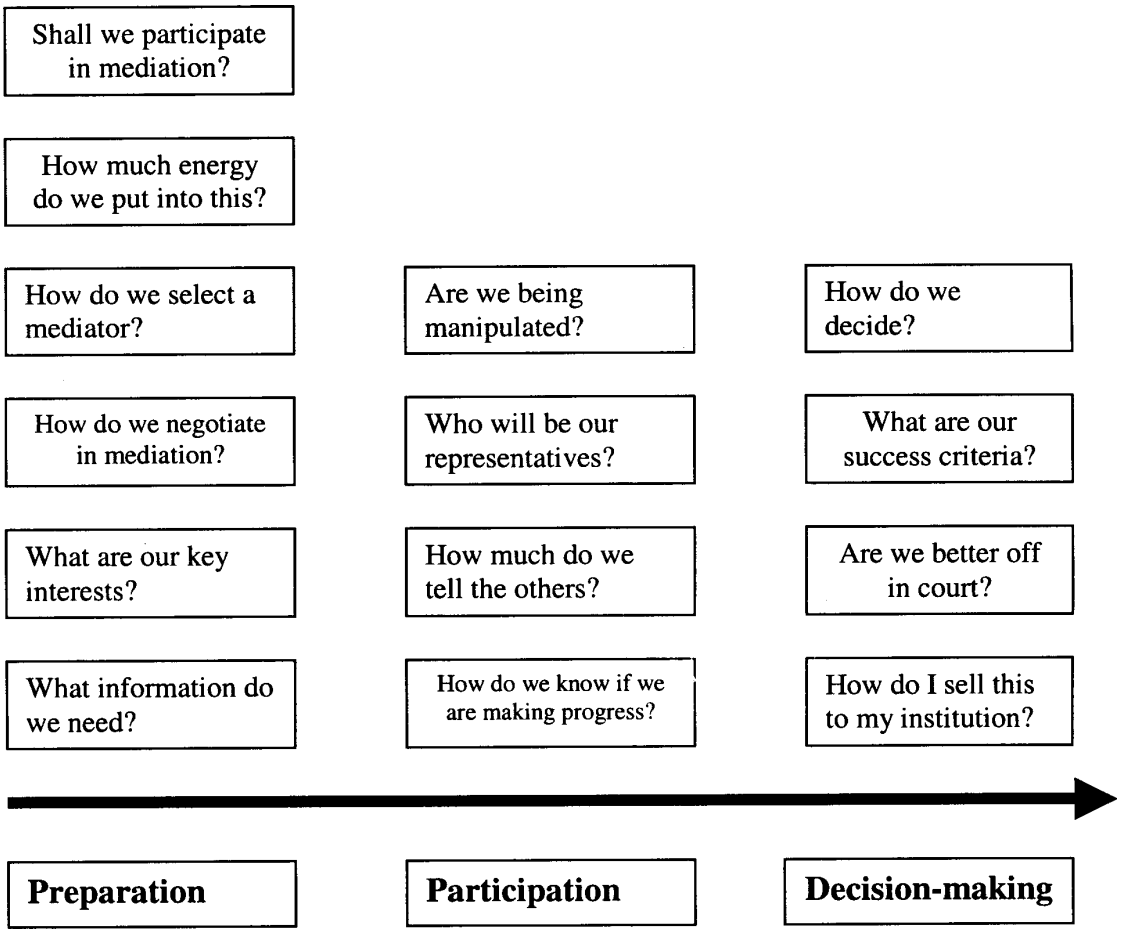
Litigation and Law

After several years of intensive discovery (production of millions of documents and numerous depositions of fact and expert witnesses), results are mixed. Summary judgment orders on legal entitlement, i.e., whether various federal reserved rights to instream flows may exist as a matter of law, have issued, as follows, leaving quantification for subsequent trial if necessary.

1. Wilderness Act (Forest Service)—SRBA court ruled right exists and extends to all water unappropriated on reservation date. On appeal, Idaho Supreme Court affirmed. Intense political firestorm followed, and Supreme Court agreed to reconsider. Argued and decision pending.
2. Hells Canyon National Recreation Area—Same.
3. Multiple Use Sustained Yield Act—Right to instream flows for fish and recreation recognized in SRBA court, overturned by Idaho Supreme Court. Not appealed. No right.
4. Wild and Scenic Rivers Act—SRBA ruled that right exists, but must be quantified. Appeal pending before Idaho Supreme Court.
5. Sawtooth National Recreation Area—Same.
6. Forest Service Organic Act (channel maintenance claims)—Right recognized by SRBA court providing U.S. can demonstrate channel maintenance flows are necessary. Trial pending.

7. Deer Flat National Wildlife Refuge (Interior)—Existence of instream flow right to ensure islands' continued status as islands for goose refuge denied by SRBA court. Appeal to Idaho Supreme Court pending.
8. Public Water Reserve 107 (BLM/stock watering rights)—Existence of right upheld by SRBA court and affirmed by Idaho Supreme Court.
9. Nez Perce and federal fisheries claims—Existence of any rights whatsoever denied by SRBA court (new judge of one year). In addition, SRBA court ruled, on issue not before it, that tribal reservation boundaries had been diminished (that is, that tribal governmental jurisdiction is greatly reduced, limited to lands held in trust). Tribal and U.S. motion to disqualify new SRBA judge because he and his family are irrigators denied by SRBA court. Appeals to Idaho Supreme Court pending.

The Mediation Process—Snake River Mediation
The Parties' Institutional Issues and Challenges



Approaches to Managing Intergovernmental Relations

Wednesday, May 17, 2000—10:15-11:45 a.m.

Moderator

Chris Carlson, Policy Consensus Initiative (PCI), Santa Fe, NM

Panelists

Matt McKinney, Montana Consensus Council, Helena, MT

Harry Seraydarian, U.S. Environmental Protection Agency, San Francisco, CA

Jan Summer, Center for Public Policy Dispute Resolution, University of Texas School of Law

Panel Abstract

The members of this panel will describe the types of innovative arrangements they have been involved in working out between federal, tribal, state, and local government agencies to resolve disputes and otherwise jointly managed natural resources issues. The purpose of the session will be to explore how these approaches—partnering, Memoranda of Understanding, joint training, etc.—are working and to distill the lessons learned.

Individual Papers

Memorandum of Understanding between Bureau of Land Management, Montana State Office, U.S. Forest Service, Northern Region, and Montana Consensus Council

Code of Professional Conduct/Montana Consensus Council

Promoting Collaborative Approaches to Federal Land Management

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Memorandum of Understanding between Bureau of Land Management, Montana State Office, U.S. Forest Service, Northern Region, and Montana Consensus Council

Promoting Consensus Approaches to Federal Land Management

I. Purpose

The purpose of this Memorandum of Understanding (MOU) is to foster the use of consensus building techniques to build agreement on federal land management issues in Montana and the Northern Region.

The U.S. Bureau of Land Management, Montana State Office (BLM), the U.S. Forest Service, Northern Region (USFS), and the Montana Consensus Council (Council) agree to discover and create opportunities to integrate consensus building techniques into the management of federal lands.

This MOU is designed to add value or supplement the current capabilities of the BLM and the USFS to design and facilitate public involvement, dispute resolution, collaborative problem solving, and consensus building processes that involve multiple stakeholders.

II. Authority

- Federal Land Policy and Management Act of 1976, as amended. Public Law 94-579 (90 STAT. 2743)
- National Forest Management Act of 1976, as amended. Public Law 94-588
- National Environmental Policy Act of 1969, as amended. Public Law 91-190
- Administrative Dispute Resolution Act of 1996, Public Law 104-320
- Negotiated Rulemaking Act of 1990, as amended. Public Law 101-648
- Natural Resource Alternative Dispute Resolution (NRADR) Initiative Strategic Plan for BLM (September 11, 1997)

III. Procedures

All parties agree to:

Develop an annual work plan to incorporate consensus approaches into federal land management. This plan may include, but is not limited to, consensus-building projects, education, training programs, research, and evaluation activities. The work plan should focus on both immediate and long term needs and interests of the BLM and USFS.

The Montana Consensus Council, at the request of the BLM and/or USFS, agrees to:

- Provide general information, advice, and consultation on public involvement, consensus building, and dispute resolution.
- Provide training and education programs.
- Assess specific situations and design a process to match the situation.
- Facilitate and mediate such processes as appropriate.
- Evaluate the effectiveness of existing or experimental consensus-building processes.
- Abide by the Montana Consensus Council Code of Professional Conduct (attached) in the course of providing these services.

The BLM, Montana State Office and the USFS, Northern Region agree to:

- When appropriate, utilize consensus building processes to help prevent expensive and lengthy litigation and enhance the satisfaction of stakeholders.
- Incorporate and improve upon existing consensus building techniques to create more communicative and cooperative and less adversarial partnerships in public and land user relationships.
- Educate managers and employees in resolving issues and disputes through consensus building philosophies and processes.
- Recognize that appeals and litigation may be necessary to establish case law and resolve ambiguities in the law.
- Continue to review existing regulations to ensure they provide opportunities for consensus building procedures.
- Identify and continuously market consensus building tools and techniques that can be used in the BLM and USFS arenas.
- Develop indicators that will measure the usage of consensus building tools and techniques throughout the BLM and USFS.
- Develop indicators to measure the success of consensus building processes in BLM and USFS.

IV. Administration

This MOU becomes effective upon signature by all of its participants.

The participants will review this MOU at least every five years to determine its adequacy, effectiveness and continuing need. The need for this MOU is expected to continue for five years, at the end of which period it will expire, unless extended or renewed.

The terms of this MOU may be renegotiated at any time at the initiative of one or more of its participants, following at least 30 days notice to the other participants.

This MOU may be cancelled at any time by one or more of its participants, following at least 30 days notice to the other participants.

Nothing in this MOU shall obligate the BLM, the USFS, or the Council to expend appropriations or to enter into any contract or other obligation. Specific work projects or activities that involve the transfer of funds, services, or property between the parties to this MOU will require the execution of separate agreements or contracts, contingent upon the availability of funds as appropriated by Congress. Each subsequent agreement or arrangement involving the transfer of funds, services, or property between the parties to this MOU must comply with all applicable statutes and regulations, including those statutes and regulations applicable to procurement activities, and must be independently authorized by appropriate statutory authority.

Contacts. The contact for the Council under this MOU is the director. The contact for the BLM under this MOU is the alternative dispute resolution coordinator. The contact for the USFS under this MOU is the director of public and governmental relations.

_____Signatures and
Date_____

Code of Professional Conduct

Montana Consensus Council
Executive Policy 1
Originally adopted in 1994
Revised in August 1998

Statement of Policy

The Montana Consensus Council is a public-private partnership currently attached to the Office of the Governor for administrative purposes. The Consensus Council is committed to the following roles and responsibilities during any and all consensus building processes that it helps design and manage.

Responsibility to the Participants

1.1 Impartiality

The council is nonpartisan. It is not an advocate for any particular interest or outcome. It seeks to be impartial—that is, it is free from favoritism or bias either by word or action—and is committed to serving all parties rather than a single party.

1.2 Appropriateness of Consensus Processes

The Council provides information to potential participants on the procedures and assistance available to build agreement or resolve disputes. It helps potential participants choose an appropriate procedure, realizing that consensus processes are not effective in resolving every issue.

1.3 Conflicts of interest

The council does not enter or continue in any consensus process if it believes that participation would create a conflict of interest or raise a substantial question as to its impartiality. The council will disclose any conflict of interest to all the participants, whenever it appears during the process.

1.4 Scope of Work

Before committing to work on a consensus-building process, the council insists that the participants and the council agree on the specific services to be provided by the council, a strategy and timetable for beginning and ending the project, and the nature of compensation to the council.

Responsibility for the Process

1.5 Process Design

The council works with all the participants to design an appropriate consensus building process. In appropriate circumstances, the Council may refer the participants to other consensus building professionals for assistance.

The council will not participate in any process where the purpose and expectations are not clear to all participants. The council will withdraw from any process if its continuing involvement is not acceptable to the participants.

1.6 Facilitation and Mediation

The council will engage in a variety of activities to coordinate the consensus process. It will serve as a impartial facilitator during meetings; focus the energy of the group on a common task; protect individuals and their ideas from attack; encourage everyone to participate and share their ideas; help the group find mutual gain solutions; coordinate pre- and post-meeting logistics; and, where necessary, shuttle among the participants between meetings. The council will also help the participants amend an agreement during the implementation process. The council will enforce the ground rules agreed to by the participants and confront any participant when the council believes the participant is not acting in good faith and is inhibiting the group from moving forward.

1.7 Confidentiality

The council will respect the confidentiality of private communications with any of the participants.

1.8 Documentation

Unless otherwise agreed to by all the participants and the council, the council shall prepare and maintain an objective record of the consensus process, including areas of agreement, disagreement, and strategies for implementation. The council shall prepare both draft and final consensus documents, and when appropriate, research documents.

1.9 Implementation
The council will continue to provide consultation to the participants during the process of implementing any agreement.

Responsibility to the Public

1.10 Unrepresented Interests
The council contributes to the integrity of the process by identifying unrepresented interests during the building or implementation of any agreement.

Commitment to Improve Services

1.11 Training and Education
The council constantly upgrades its skills through formal education, training programs, workshops, practical experience, and research and publication.

1.12 Evaluation by Participants
In an effort to improve its consensus-building services, the council encourages candid comments and suggestions about its performance. The council encourages participants to suggest improvements to the consensus-building, education, and research services provided by the council.

Promoting Collaborative Approaches to Federal Land Management

An Annual Status Report
prepared by the Montana Consensus Council, U.S. Forest Service, Bureau of Land Management

January 2000

Introduction

On December 14, 1998, the USDA Forest Service (USFS), Northern Region; USDI Bureau of Land Management (BLM), Montana State Office; and the Montana Consensus Council signed a Memorandum of Understanding (MOU) to foster the use of consensus-building techniques to build agreement on federal land management issues in Montana and the Northern Region. The parties formed a steering committee to develop an initial action plan under the MOU for calendar year 1999. The committee included two members from the Montana Consensus Council, three from the USFS, and three

from the BLM. The committee met during the spring of 1999 to draft the action plan, which was approved in April 1999.

This report summarizes the activities of the Montana Consensus Council, the USFS, and the BLM to implement the MOU. Most of the items in the action plan have been accomplished, along with other work not specifically anticipated in the action plan that met the intent of the MOU.

Education and Training

Federal land management workshops: During April and May 1999, the Consensus Council conducted introductory regional workshops with line officers, agency staff, community leaders, and others interested in federal land management in Butte, Billings, Glendive, Great Falls, Libby, and Missoula. The purpose of the workshops was to review the MOU between the council and the USFS and BLM and to explain the Council's programs and services. The council explained alternative dispute resolution and collaborative approaches to public participation, and asked participants to discuss their experiences) long-term interests, and needs regarding consensus-building approaches to federal land management.

Consultations related to federal land management: The council provided advice and information to:

- Andrus Center for Public Policy, on the Council's projects involving federal land management issues.
- Congressman Rick Hill's office, on the applicability of the Federal Advisory Committee Act to the creation of a citizens' advisory council for Glacier National Park.
- The Trust for Public Land, on land use and growth management in Montana.
- Institute for Environment and Natural Resources, University of' Wyoming, on collaborative approaches to compliance with the National Environmental Policy Act, and on research related to community based collaboration.
- Gallatin Valley Snowmobile Association, on how to proceed in a dispute with the U.S. Forest Service and conservation groups on a winter use travel management plan.
- U.S. Environmental Protection Agency, on ways to cultivate in-house facilitators who can provide services to their home agency.
- Rocky Mountain Research Station, U. S. Forest Service, on a technical review of a manuscript on collaborative approaches to public land management.
- Member, BLM resource advisory committee, Coeur d'Alene, Idaho, on how to be an effective participant in public involvement and collaborative processes.
- U. S. Bureau of Land Management field and state offices, on how to involve stakeholders and convene a fair, effective, efficient process for possible national designation of the upper Missouri River, and on Montana Consensus Council case studies for an agency newsletter.
- U.S. Bureau of Land Management Alternative Dispute Resolution Coordinator, on the council's case studies and web site, and on the Consensus Council's Limestone Hills case study and a request for 600 copies of *Resolving Public Disputes: A Handbook on Building Agreement.*

- Representatives on the Central Montana Resource Advisory Council convened by the U.S. Bureau of Land Management, on organizing and convening a working group on managing the Wild and Scenic stretch of the Missouri River.
- U.S. Forest Service, Region One, on the possibility of facilitating a multi-agency technical fact-finding committee.

Research and Communication

Communication and consensus—strategies for fulfilling the nation's environmental policy: The council was invited to a national three-day workshop in March 1999 sponsored by the Center for the Rocky Mountain West and the Institute for Environment and Natural Resources. The workshop focused on strategies for improving compliance with the National Environmental Policy Act (NEPA) through collaborative processes. Other attendees included leaders from Congress and western states. The Council chaired a session at the workshop and is participating in further research and publication of a report on NEPA and collaborative compliance strategies for the President's Council on Environmental Quality, Congress, and other interested audiences.

The future of our public lands: In March 1999 the council attended a symposium on federal lands policy hosted by the Andrus Center for Public Policy in Boise, Idaho. Speakers included Michael Dombeck, chief of the USFS; Robert Stanton, director of the National Park Service; Thomas Fry, acting director of the BLM; and Jamie Clark, director of the U.S. Fish and Wildlife Service. All four endorsed the theme of "collaborative stewardship" for their agencies and spoke in support of local and regional efforts to enhance citizen participation in federal land-use decision making. The council is preparing a summary report on the symposium.

Stakeholder-designed public involvement strategy: After conversations with USFS supervisors and land managers, the Consensus Council prepared a research proposal on developing a stakeholder-designed strategy for public involvement for revising forest management plans on the Flathead, Bitterroot, and Lolo national forests. The council is reviewing past public involvement practices in forest planning and best practices cited in the literature.

Demonstration Projects

Snowmobile access on the Lolo National Forest: During the 1998-1999 winter, the USFS followed through with an earlier decision to prohibit snowmobile access to certain routes in the Great Burn area of Lolo National Forest northwest of Missoula. The Montana Snowmobile Association filed a lawsuit, and wilderness advocates intervened on behalf of the forest service. The Montana Snowmobile Association, USFS, and the governor then asked the Montana Consensus Council to bring the parties together. The council interviewed representatives of each stakeholder group to determine whether the situation was ripe for mediation or consensus building. Based on the interviews, it was clear that an ad hoc consensus-building process was not appropriate at this time. The council then convened a meeting at which stakeholders agreed to consider entering into

a negotiated settlement process within the existing legal framework. The council is not involved in that process.

Flathead National Forest motorized winter use: In September 1999 the Flathead National Forest asked the Consensus Council to conduct a situation assessment and possibly design and coordinate a collaborative process under the requirements of NEPA to resolve a long-standing dispute over snowmobile use on parts of the forest. As snowmobile use has increased on the Flathead National Forest; some people are concerned that off-trail motorized use is occurring in areas designated in the forest plan to be managed for nonmotorized recreation. Some conservation groups are threatening litigation, claiming that the Flathead National Forest is not enforcing its own forest plan. The council interviewed stakeholders in October and in November released a report summarizing the findings. The council then facilitated two public meetings in Kalispell, both of which were very well attended. Based on the interviews and input from the public meetings, Flathead Forest officials decided to convene a series of informal public dialogues and open houses to clarify the issues and explore mutually satisfying ways to resolve them. This in turn may lead to a NEPA process to amend or revise the forest plan.

Zortman-Landusky Mine Reclamation Plan: At the request of representatives from the Fort Belknap tribes, U.S. Environmental Protection Agency (EPA), BLM, U.S. Bureau of Indian Affairs, and the Montana Department of Environmental Quality, the Consensus Council is assisting a technical work group to identify options and impacts for reclaiming the two mining sites. Participants have completed the technical analysis and agreed to complete a supplemental environmental impact statement. The Consensus Council is also interviewing senior decision makers in the agencies to clarify expectations, priorities, and the time frame for completing a reclamation plan as part of a settlement agreement to litigation and in response to an order from the BLM's Interior Board of Land Appeals.

Central Montana Resource Advisory Council: At the request of citizens and the BLM, the Montana Consensus Council provided advice on how to meet the facilitation and consensus-building needs of a resource advisory council focused on the long-term management of the wild and scenic reach of the Missouri River. In December 1999 the Consensus Council agreed to design and facilitate a three-year process to develop a management plan for the wild and scenic reach.

Action Plan for the Year 2000

The Montana Consensus Council is willing to consider a variety of activities to achieve the intent of the MOU. We have suggested a few ideas below. At this point, we would ask members of the BLM and USFS leadership teams, as well as other interested people within these agencies, to submit additional ideas on how to continue the work of fostering the use of consensus-building techniques to build agreement on federal land management issues.

Education and Training

The Consensus Council and the Consensus Building Institute are willing to teach a two-day short course, "Building Agreement on Natural Resources and Public Policy." The course focuses on strategies to (1) shape wise, stable, and popular public decisions; (2) effectively participate in a collaborative process; and (3) design and manage effective processes. The target audience includes planners, public affairs staff, field managers, and other key staff actively engaged in collaborative stewardship and public participation on public lands projects. Four regional workshops have been scheduled for the spring of 2000 with the Denver regional office of EPA, the USFS in Alaska, the Natural Resources Leadership Institute at the University of Kentucky in Lexington, and the U.S. Institute for Environmental Conflict Resolution in Tucson, Arizona. The Council is also discussing possible workshops with the BLM's Southwest office, the Western Association of Planners, the Western Rural Development Center, the Institute for Environment and Natural Resources at the University of Wyoming, and the Council of State Governments Western office.

Research and Communication

Stakeholder-designed public involvement strategy: Building on the work started in 1999, the Consensus Council is preparing a stakeholder survey to be distributed during the winter/spring of 2000. We will deliver a final report to the USFS by June 2000.

Evaluation of RACs: The state director of the BLM has expressed interest in asking an objective third party to evaluate the effectiveness of Resource Advisory Councils. The Montana Consensus Council can work with the state director and others to frame the evaluation process and assemble the necessary funding.

Demonstration Projects

Central Montana Resource Advisory Council (RAC): The Consensus Council has begun working with the Central Montana RAC to design and facilitate a process to develop a management plan for the wild and scenic reach of the Missouri River. This work is scheduled to continue through 2002.

The original action plan listed nine potential demonstration projects, three of which (Snowmobile Access on the Lolo National Forest, Developing a Stakeholder-designed Public Involvement Strategy for Forest Plan Revisions, and Evaluating the Effectiveness of RACs) are described above. The other six may benefit from ADR and collaborative participation as we move forward in the year 2000 and beyond. These include:

Off highway vehicle (OHV) policies

- Tin Cup Dam issue
- Travel planning issues (emerging long-term)
- Recreation planning (emerging long-term)
- U.S. Fish and Wildlife Service and BLM, Charles M. Russell Refuge reserved water rights issues
- Regional Coal Team meetings in Montana and northern Wyoming

For more information, or if you have suggestions to include in the 2000 action plan, please contact:

Matthew McKinney, the Montana Consensus Council at mmckinney@state.mt.us or call (406) 444-2075
Ed Nessleroad, the U.S. Forest Service, at (406) 329-3089
Brad Brown, the Bureau of Land Management, at (406) 896-5189

FACA: A Tool or a Problem?

Wednesday, May 17, 2000—10:15-11:45 a.m.

Moderator

Suzanne Orenstein, Prides Crossing, MA

Panelists

Ed Keable, Office of The Solicitor, U.S. Department of the Interior, Washington, D.C.

Bruce Moore, Bureau Reclamation's Lower Colorado Regional Office, Boulder City, NV

Panel Abstract

The Federal Advisory Committee Act (FACA) requires that committees or similar groups established or utilized by federal agencies for the purpose of obtaining advice for that agency (that includes members who are not federal, state, and/or tribal government employees) be open to the public, have a membership balanced among interest groups, and be fair and clear about agency roles. Dispute resolution processes to resolve environmental problems involving federal actions are frequently required to comply with the FACA. The process for obtaining such a charter can be complicated depending on agency procedures, causing some environmental policy makers to view the requirement to obtain a FACA charter as a barrier to convening negotiated forums. This panel will look at cross-agency experiences with FACA and ADR, look at circumstances in which FACA does not apply, and will present several models for using FACA and expediting the formation of FACA committees for the purpose of encouraging collaborative problem solving on contentious environmental problems.

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SESSION II

WEDNESDAY, MAY 17, 2000
1:30–3:30 P.M.

Grazing on Public Lands: Alternatives for Conflict Resolution

Wednesday, May 17, 2000—1:30-3:00 p.m.

Moderator

Rebecca Mills, Great Basin National Park, Baker, NV

Panelists

Kathy Davis, National Park Service, Southern Arizona Office

Dan Heinz, Ely, NM

Gene Kolkman, Bureau of Land Management, Ely, NV

Gracian Uhalde, Rancher, Ely, NV

Panel Abstract

The panel will address the benefits and drawbacks of alternatives to resolving conflicts regarding grazing on public lands. Panelists include a national park superintendent and resource manager, a BLM district manager, a public land rancher, and a conservationist/ former Forest Service manager. Four of the panelists work together on the White Pino County Coordinated Resource Management Steering Committee. Alternatives discussed in this panel will include allotment-management planning by committees, including affected ranchers and public land managers; resource advisory councils; acquisitions and donations of grazing permits by third parties; on-the-ground training and pilot projects for stewardship of grazed public lands; and county-coordinated resource management planning for wildlife and livestock grazing.

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Science and Politics: Making Oil and Water Mix through Innovative Collaborative Processes

Wednesday, May 17, 2000—1:30-3:00 p.m.

Moderator

Patrick Field, Consensus Building Institute, Cambridge, MA

Panelists

David Fairman, Consensus Building Institute, Cambridge, MA

Gregory Sobel, Environmental Mediation Services, Sudbury, MA

Kim Vogel, Community Mediation Services, Augusta, ME

Panel Abstract

Do you find that politics too often overrule good, technical decisions reached by hard and careful analysis? Or, do you find too often that technical analysis is so little informed by the interests of agencies and their publics that final technical and scientific reports are “dead on arrival”? The presenters will share brief case studies to highlight how this problem has been solved in three different collaborative processes. The cases include the technical review and evaluation team as part of the Superfund cleanup process at Massachusetts Military Reservation, the use of an independent epidemiologist to assist diverse stakeholders in a four-town area surrounding a Maine paper mill in conducting a cancer incidence study, and the use of technical advice in the siting of a low-level radioactive waste facility. The panel will engage in a lively discussion about possible criteria that should be used to help design the kinds of innovative processes that work. Bring your ideas, problems, and skepticism to see if oil and water—science and politics—really can mix.

Panel Summary

Individual Papers

Developing Credible Public Health Data With Diverse Stakeholders in the Midst of High Controversy in a Rural New England Mill Community—Northern Oxford County Coalition, Maine
By Patrick Field

Integrating an Interagency, Multidisciplinary, Consensus-based Science Advisory Team into Cleanup Decision Making at the Massachusetts Military Reservation—The Technical Review and Evaluation Team (TRET)
By Gregory Sobel, Esq.

Integrating Technical Advice and Stakeholder Concerns in the Siting Process for a Low-level Radioactive Waste Disposal Facility—The Maine Low Level Radioactive Waste Authority
By David Fairman

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Panel Summary

Do you find that politics too often overrules good, technical decisions reached by hard and careful analysis? Or do you find too often that technical analysis is so little informed by the interests of agencies and their public that final technical and scientific reports are "dead on arrival"?

Collaborative processes in environmental decision making do face a particular challenge: How do you ensure political decision making and interest-based negotiation is informed by thorough technical analysis while technical analysis is conducted with political and negotiation realities kept in mind? The good news is, this challenge can be met. The following brief case studies will highlight how this problem has been solved in three different collaborative processes utilizing "joint fact-finding." Through joint fact-finding, stakeholders work together to compile and pool relevant information and to "translate" it into a form that can be used by decision makers and others in order to create the foundation for broad-based consensus.

Through a thorough and up-front process design with the assistance of a neutral facilitator or mediator, joint fact-finding offers a flexible approach that can be adapted easily and successfully to best meet the needs of each particular situation.

The panelists will present you with three examples of successful joint fact-finding processes drawn from their professional practices. The cases include: the technical review and evaluation team as part of the Superfund cleanup process at Massachusetts Military Reservation; the use of an independent epidemiologist to assist diverse stakeholders in a four-town area surrounding a Maine paper mill in conducting a cancer incidence study; and the use of technical advice in the siting of a low-level radioactive waste facility.

Each case study illustrates the possible criteria that should be used to help design the kinds of innovative processes that really do work to mix oil and water—science and politics—with beneficial results to all.

Developing Credible Public Health Data with Diverse Stakeholders in the Midst of High Controversy in a Rural New England Mill Community—Northern Oxford County Coalition, Maine

By Patrick Field, Vice President, Consensus Building Institute

The Northern Oxford County Coalition (NOCC) is an example of a situation in which stakeholders gained knowledge and expertise together through joint fact-finding. In this case, residents of the Androscoggin River valley in west central Maine became increasingly concerned that they faced higher-than-average risks of cancer due to air pollution from a local paper mill. A 1991 television news show enflamed the community by dubbing the region "cancer valley." At the same time, residents were equally concerned that any action against the mill would cause it to close, costing hundreds of people their jobs and severely damaging the local economy as this paper mill employed 1,600 and affected 35 percent of the area workforce. The mill, which was in compliance with all environmental regulations, disputed the charges made against it, and almost no scientific data existed to support or disprove the various viewpoints. Moreover, during this time, new air toxic regulations were being developed at the federal level.

This scenario prompted the Maine Department of Environmental Protection (DEP) to initiate the NOCC, comprised of state DEP, EPA, public health officials, local governments, labor union, local health care providers, interested citizens, and local businesses, including the paper mill. The NOCC was charged with examining the issues. However, without a clear process in place, the NOCC struggled the first six months in establishing a direction. The coalition's initial consultant focused on smoking and wood smoke, factors extraneous to the mill, while the NOCC continued to debate whether the mill was or was not causing cancer in the area.

The NOCC then prioritized health as the number one issue to tackle first and began designing a process for addressing this issue. A neutral facilitation team was hired and a technical subcommittee (TSC) was appointed to identify and engage technical assistance. In addition, the state Department of Public Health agreed to help, using state cancer registry data. The NOCC proceeded to study and analyze cancer incidence and air pollution levels in the valley.

The TSC considered available methodologies and chose to do a cancer incidence study. Various epidemiologists were interviewed and the state Health Department agreed to assist in evaluating the numbers. The NOCC met with its chosen technical expert, was educated on terminology and decided what to compare the numbers to, recognizing limitations/problems with data. In an attempt to interpret the "facts," the TSC debated the meaning of standard incidence ratios (SIRs), causality, and the written language, then crunched numbers, reviewed the results, and wrote a report through several iterations which was ultimately peer reviewed. The TSC then submitted its findings to the full NOCC. Through this process, however, stakeholders found that health data on the incidence of cancer in the area was neither complete nor conclusive.

The results prompted the stakeholders to ask: Given what we've learned, what do we do now?

Prior to their involvement in the coalition, most NOCC members did not have previous technical expertise on these issues and were not scientists, but through a long process of jointly analyzing and synthesizing data and learning from the consultant about basic scientific methods and limitations, group members gained enough of a technical background to feel comfortable presenting their findings in a clear and concise way to the public. And while much of the data they gathered were inconclusive, stakeholders were able to understand and convey to others why that was the case. In fact, briefings were given to local physicians and hospitals. In addition, the findings document was distributed to libraries and health providers and published in a final newsletter and local newspaper insert.

Several important lessons can be learned from the challenges faced by the NOCC in undertaking its joint fact-finding process:

Designing the process

- Good process can build credibility in data and technical information, even in the midst of intense controversy, strong emotions, and a history of distrust and conflict.
- Good process can credibly reveal the limitations of technical investigation, the difficulty of causality, and the need for action in the face of uncertainty.
- Tackle the issues that people care most about first, to build trust and address their concerns directly and immediately.

Using technical expertise

- Ensure that technical experts also have consensus building skills.
- Use technical expertise and knowledge from inside and outside the community. The community has important knowledge and data. The community likely has technical experts who can contribute both expertise and credibility to data analysis. Outside technical expertise can enhance and advance the understanding of the community.

Educating others

- Lay people can become highly informed and sophisticated on technical matters. Educate one another, investigate together, and sort through scientific questions, assumptions, and interpretations jointly, not separately.
- Technical processes must be linked to larger public outreach efforts. Share with others using multiple forums: committees, briefings, media, and newsletters.

Reaching consensus

- Frame the local dispute within the larger scientific debate, as understanding the larger scientific debate can lessen intensity of local conflict around the same issues.
- Help the participants focus on the purpose and ultimate intent of data gathering and analysis. More data may not necessarily provide answers that can lead to action. More data may not alter participants' strongly held views and opinions. Final reports from consultants or technical work groups may not reveal definitive "answers," in which case participants must decide how to proceed in the face of continuing uncertainty.

Integrating an Interagency, Multidisciplinary, Consensus-based Science Advisory Team into Cleanup Decision Making at the Massachusetts Military Reservation— The Technical Review and Evaluation Team (TRET)

By Gregory Sobel, Esq., Environmental Mediation Services

Another situation involving a science intensive dispute that was assisted through a joint fact-finding process is that of the Massachusetts Military Reservation (MMR), a 22,000-acre active military facility on Cape Cod that was declared a Superfund site due to soil and groundwater contamination. More than 70 years of "standard" chemical handling and waste disposal practices led to extensive pollution of this area which rests above the Upper Cape's sole source of drinking water. Fire fighters trained by pumping fuel onto old machinery and igniting it, reconnaissance planes dumped fuel before landing as a safety measure, pesticides were used extensively, and an unlined landfill lies within the area. Groundwater contamination was first detected in 1978. Today, more than a dozen groundwater plumes and multiple source areas have been identified with an array of contaminants including EDB, PCE, TCE, nitrates and phosphates.

At MMR, local residents, environmentalists, state and federal agency officials, and the military disagreed about the method that should be used to clean up groundwater contamination plumes and what level of remediation was necessary. There was a great deal of scientific uncertainty and disagreement regarding which cleanup methods would be most effective.

In 1995 the National Guard Bureau announced that a key citizen's advisory team had completed its mission and would be disbanded. The resulting uproar led to a revival of the team and the entry of neutral facilitation services for the limited purpose of assisting this single committee. Continued high tension and low productivity led to this facilitator's report late in 1995 recommending that the team's agenda be developed jointly by the committee, that commitments made and follow-up be closely tracked, and importantly, that there be direct and frequent communication between the committee and the staff developing the cleanup plan. At that time, however, the facilitator's recommendations were not implemented.

A science and policy crisis ensued in 1996 when the "60% design" plan for plume containment was issued. This design called for pumping 27 million gallons of water per day, but failed to account for overall stress to aquifer and ecological impacts, e.g., the plan did not model drawdown from ponds and wetlands and did not predict interactions among plumes. Regulators, town representatives, and citizen activists rejected this design outright. Regulators called for new management, a new design, funding of commitments, and an enforceable schedule.

Prior to this 1996 crisis, there had been a poor relationship among regulatory and military agencies, public involvement had been resisted, and cleanup plans were developed

in a “black box.” In the wake of the crisis, however, the paradigm shifted to allow for agency partnering, expanded public involvement, and a multidisciplinary, iterative approach to cleanup planning. Neutral process services were expanded from a single facilitator assisting one committee to a team of neutrals providing advice on process design and facilitating numerous public involvement teams, and technical and decision-making meetings among all stakeholders. Specifically, the U.S. Air Force Center for Environmental Excellence, U.S. EPA Region I, Massachusetts DEP, four town governments represented by town selectmen, residents directly affected by the contamination, local environmental groups and citizen activists, the scientific community, and elected state and federal officials were all deeply involved in these new consensus building initiatives.

One example of the paradigm shift at MMR was the creation of a multidisciplinary team of technical experts, called the Technical Review and Evaluation Team (TRET), to provide objective scientific advice to agency decision-makers and other stakeholders to aid in the development of recommendations regarding treatment options at MMR. The TRET is an interagency, multidisciplinary group of hydrogeologists, ecological risk assessors, and human health risk assessors whose members include representatives of the U.S. Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (DEP), the U.S. Geological Survey, Mitretek and Oak Ridge National Laboratories. The TRET operates by consensus, gathering and analyzing information jointly, and developing recommendations that are forwarded to the lead technical decision-makers at the site, the remediation project managers (RPMs). The TRET has evolved into an influential and integral part of the decision making structure at MMR. Notwithstanding that the group is funded solely by the military, the TRET’s neutrality and expertise is widely respected by the range of MMR stakeholders.

The initial role of the TRET in the wake of the failed 60 percent design was to help find a way forward for the cleanup program. It recommended a different approach than the simultaneous, 100 percent containment and treatment of all plumes that had been a central feature of the failed plan. The 60 percent design plan addressed toxicological risk reduction with a politically attractive approach (stop migration of all the plumes simultaneously), without considering ecosystem impacts. After intensive deliberations among TRET members and close interaction with all other stakeholders, the TRET proposed a new set of design criteria and plume containment strategies that would effectively address the contamination without unacceptable risks to human health, biological organisms, or regional groundwater. Their recommended comprehensive, iterative design approach was adopted. This set the stage for decision-makers to consider tradeoffs among the various plume response options and the balancing of sometimes conflicting objectives. For certain plumes, the TRET proposed and stakeholders accepted a phased installation of pump-and-treat systems or a pilot test that could be implemented in the near-term. In other cases, additional data or assessment needs were identified (e.g., more information about the degree to which certain plumes enter ponds and the acceptable lifetime loading of specific contaminants to those ponds.)

The TRET’s iterative, comprehensive approach to addressing MMR groundwater con-

tamination is now the foundation of the cleanup program. After emerging from the crises of 1996, the agencies and other stakeholders have used the TRET to advise on selected controversial and technically complicated issues when there is a perceived need to remediate but no scientific consensus on the best technical approach.

The TRET's success rests on a combination of good science and collaborative process.

- TRET members include scientists from several disciplines that, together, cover the range of expertise required for a comprehensive understanding of the complicated issues at the site.
- All stakeholders were involved in establishing the TRET and defining its role.
- Issues the TRET addresses arise from the concerns of technical staff, policymakers and other representatives of the public.
- The TRET is advisory and communicates its advice to the RPMs who are the lead technical decision-makers for the site. The ways that the TRET works with the RPMs and the range of stakeholders are periodically evaluated and modified.
- While some TRET members are employed by the regulators, when working on this team they operate from their scientific expertise, not their regulator role. At times the TRET's advice is contrary to the stated positions of their own agencies.
- Facilitation of the TRET helps the team maintain its focus on the priority issues, complete its ambitious agendas, and support the collaborative style that the team prefers.
- The TRET often begins its work on an issue with a wide-ranging examination, including other experts and stakeholders. Then, with just TRET members and support staff present it develops and refines its recommendations.

Integrating Technical Advice and Stakeholder Concerns in the Siting Process for a Low-level Radioactive Waste Disposal Facility—The Maine Low Level Radioactive Waste Authority

By David Fairman, Ph.D., Vice President, Consensus Building Institute

Between the 1950s and 1980, three national low-level radioactive waste (LLRW) disposal sites were operating in the U.S. In the wake of Three Mile Island and Love Canal, there was a significant lobbying effort to close these three LLRW disposal sites. After Congress passed a law in 1985 requiring each state to develop a LLRW disposal plan or compact, Maine established the Maine Low-level Radioactive Waste Authority (Authority) in 1987 and charged the Authority with locating a site in Maine that met technical and safety requirements. In addition, the Authority was required to secure the voluntary agreement of the community where the LLRW disposal facility was sited, including at least 60 percent support in a community referendum. The Authority did not have the power of eminent domain.

A citizen advisory group (CAG) was formed in response to public concern about the siting process, with Endispute Inc. as facilitator. Members included state regulators, waste generators, environmental, business and public interest groups, and technical experts. Candidate site communities were added later in the process. Key issues for the CAG included: LLRW health/environmental risk assessment; facility siting process and criteria; facility design and operation; communication with candidate site communities; and negotiation with and compensation to candidate site communities.

In developing siting criteria, the Authority and the CAG faced the challenge of identifying key risk factors for waste transport and for LLRW storage/disposal over a 500-year time span. To begin, the Authority and the CAG employed joint fact-finding about LLRW exposure pathways and facility designs involving multiple presentations by technical consultants and outside experts who represented a wide range of viewpoints on LLRW risks and facility designs. Using this information, the Authority and the CAG developed exclusion criteria, fundamental performance criteria, avoidance factors, and preference factors for prioritizing candidate sites.

The group faced a challenge with regard to the preference factors for prioritizing candidate sites. Fundamental performance criteria were requirements for the site, e.g., geologically stable over a 500-year time period. Avoidance factors were prohibitions, e.g., the site could not be located within one mile of any household or municipal water supply source. In contrast, preference factors were not meant to help the Authority make “yes/no” decisions. Rather, they were designed to be measures of whether one potential site was “better or worse” than another. By applying the preference criteria to a set of potential sites that met all fundamental performance and avoidance criteria, the Authority could prioritize sites for further investigation and for negotiation with community leaders.

The CAG generated a “long list” of possible preference factors (e.g., proximity to roads and emergency services, distance from parks and recreation areas). There was broad agreement within the CAG that some of these factors should be considered more important than others, but the CAG members did not agree on how they should be ranked.

Questions about the ranking of preference factors could not be answered strictly through objective technical means, since people could legitimately disagree on the relative importance of their preferences, e.g., whether it was more important to ensure proximity to roads or distance from parks and recreation areas. This challenge was met by the group through a consensus building “preference factor ranking workshop.”

The facilitators and the CAG identified roughly 20 people, representing the major stakeholder groups and also including technical experts, to participate in the workshop. Prior to the workshop, participants were asked to rank the 19 preference factors as “very important,” “somewhat important,” or “less important.” During the workshop, an initial tally of the individual rankings was presented and the group discussed each factor. Individuals were able to make their case for the factors they felt were most important, and technical experts were able to contribute to the discussion without dominating it. After all the factors had been discussed, the facilitators asked the group to rank them again, tallied the results, and presented the group ranking.

As a result of the dialogue about each preference factor, a number of participants changed their ranking. In most cases, the “spread” of individual rankings across very, somewhat, and less important categories narrowed, so that the group was closer to consensus on what priority each factor should have after group discussion than before. The facilitators summarized the discussion and the consensus or super-majority recommendations of the workshop participants, and also noted points of disagreement.

This ranking process (discussion, tally, facilitators’ summary and recommendation) was followed with the question: Which preference factors should the Authority use—only the ones ranked “very important,” those ranked “very and “somewhat” important, or all of them? The group then discussed whether the Authority should gather additional data if necessary to evaluate a potential site against one of the preference criteria.

After this workshop, the facilitators provided a report to the Authority that outlined the process and the results—the proposed preference factor rankings, views on which factors the Authority should use, and on data gathering. The full CAG then discussed the workshop report, and made a recommendation to the Authority endorsing the consensus and super-majority recommendations in the report. The Authority then made a decision to apply the preference factors recommended by the workshop and the CAG.

The Authority-CAG siting criteria development process was beneficial in several ways. First, providing a range of independent expert views, including views of experts not considered mainstream, paid off by building the Authority’s credibility. It allowed stakeholders who hadn’t already made up their minds to develop informed opinions and have confidence in them. It also minimized opportunities for dogmatic stakeholders to dominate and polarize discussion. Further, the technical consultants’ investment in relationship building was advantageous to the process, as they were seen as advisors to and supporters of the CAG, not only as the Authority’s “hired guns.” This strengthened their credibility when they moved from presenting facts to presenting their expert judgment, and allowed them to maintain equilibrium in the face of persistent efforts by some anti-nuclear advocates to undermine the credibility of the technical information they presented.

Moreover, the integration of technical consultants as advisors in the ranking workshop worked. The facilitator helped the group understand the distinction between objective analysis and value-based ranking, while the technical experts helped the CAG identify and analyze preference factors, but did not oppose the inclusion of factors that they saw as irrelevant from a health, safety, or operations standpoint. Therefore, the outcome of the preference factor ranking workshop gave the Authority both a technical and a stakeholder basis on which to make defensible decisions on use of preference factors.

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Using the Enlibra Principles as a Value-added Tool to Promote Consensus

Wednesday, May 17, 2000—1:30-3:00 p.m.

Moderator

Joel Hirschhorn, Center for Best Practices, National Governors' Association, Washington, D.C.

Panelists

Adam Saslow, Western Governors' Association, Denver, CO

Jim Souby, Western Governors' Association, Denver, CO

Ellie Towns, New Mexico Office of the Secretary, Environment Department, Santa Fe, NM

Cathy Tyson, New Mexico Office of the Secretary, Environment Department, Santa Fe, NM

Panel Abstract

The panelists in this session will present what the Enlibra principles are, how they were created, and how they have been successfully used in environmental and natural resource conflicts and disputes. Two western governors first developed the Enlibra doctrine based on their successful experiences dealing with environmental and natural resource issues. Subsequently, both the Western Governors' Association and the National Governors' Association adopted the principles as official policy. Many governors are committed to using the Enlibra framework as an alternative to traditional regulatory and legal approaches, and as a principal tool for collaboration rather than continued polarization. For example, New Mexico's governor has issued an executive order directing state agencies to use the Enlibra doctrine. In practice, as an early step in any form of conflict resolution and consensus building, a presentation is made of the Enlibra doctrine with the objective of having the participating stakeholders reach consensus by using the Enlibra principles in their subsequent activities. Evidence is building that the Enlibra principles help people from different backgrounds having different perspectives and objectives reach common ground with creative problem solving.

Individual Papers

Enlibra: A New Shared Doctrine for Environmental Management
By Joel S. Hirschhorn

Putting Enlibra to Work for New Mexico
By Cathy Tyson

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Enlibra: A New Shared Doctrine for Environmental Management

By Joel S. Hirschhorn, Director, Natural Resources Policy Studies Division, National Governors' Association, Washington, D.C.

Background

During the first half of the 1970s, the nation enacted strong statutes to protect air and water, regulate waste, ensure the safety of drinking water, and protect endangered species. Several years later, the Superfund statute was enacted to speed the cleanup of hazardous waste sites. In each case, a federal program was developed to address immediate and widespread threats to the nation's natural resources. The nature of pollution problems in that era seemed to justify the passage of strong, command-and-control laws that would protect the nation's environmental quality. Heavy-handedness was not seen as a problem, and risk-based, cost-effective decision making was not seen as necessary because there were so many serious problems and cost-effective opportunities for environmental protection.

These laws enabled the nation to make enormous progress toward the protection of its resources. However, the nature of the pollution problems today is different. The problems the nation now faces involve a huge number of small and diverse sources, each contributing a minor amount of pollution. Many of these problems involve making difficult trade-offs and balancing costs and risks. These problems do not lend themselves to command-and-control regulation. Moreover, resources are more constrained today than they were 25 years ago. A new approach to environmental management is required to respond to the environmental challenges of the twenty-first century.

Principles

Based on extensive state and regional experience, the nation's governors commit to a new doctrine to guide natural resource and environmental policy development and decision making. That doctrine is based on the principles below, each of which is dependent on the others. The integration of these principles is critical to their interpretation and the success of the new doctrine.

1. National standards, neighborhood solutions: Assign responsibilities at the right level. There is full acknowledgment that there are environmental issues of national interest, ranging from management of public lands to air and water quality protection. Public processes are used to identify and protect the collective values of the nation's public. No existing laws or identified legal rights and responsibilities are rejected. The role of the federal government is supported in passing laws that protect these values as well as setting national standards and objectives that identify the appropriate uses and levels of protection to be achieved. As the federal government sets national standards, it should consult with the states, tribes, and local governments as well as other concerned stakeholders to access data and other important information. When environmental

standards have not been historically within the federal jurisdiction, nonfederal governments retain their standard setting and enforcing functions to ensure consideration of unique, local-level circumstances and community involvement.

With standards and objectives identified, there should be flexibility for nonfederal governments to develop their own plans to achieve them and to provide accountability. Plans that consider more localized ecological, economic, social, and political factors can have the advantage of having more public support and involvement and therefore can reach national standards more efficiently and effectively.

Governments should reward innovation and take responsibility for achieving environmental goals. They should support this type of empowerment for any level of government that can demonstrate its ability to meet or exceed standards and goals through locally or regionally tailored plans. The federal government should support nonfederal efforts in this regard with funds and technical assistance. In the event that no government or community is progressing toward specific place-based plans, the federal government should become more actively involved in meeting the standards.

2. Collaboration, not polarization: Use collaborative processes to break down barriers and find solutions. The regulatory tools the nation has been relying on during the last quarter of a century are reaching the point of diminishing returns. In addition, environmental issues tend to be highly polarizing, leading to destructive battles that do not necessarily achieve environmental goals. Successful environmental policy implementation is best accomplished through balanced, open, and inclusive approaches at the ground level, where interested stakeholders work together to formulate critical issue statements and develop locally based solutions to those issues. Collaborative approaches often result in greater satisfaction with outcomes and broader public support, and they can increase the chances of involved parties staying committed over time to the solution and its implementation. Additionally, collaborative mechanisms may save costs when compared with traditional means of policy development. Given the often local nature of collaborative processes, it may be necessary for public and private interests to provide resources to ensure these processes are transparent, have broad participation, and are supported with good technical information.

3. Reward results, not programs: Move to a performance-based system. A clean and safe environment will best be achieved when government actions are focused on outcomes, not programs, and when innovative approaches to achieving desired outcomes are rewarded. Federal, state, and local policies should encourage “outside-the-box” thinking in the development of strategies to achieve desired outcomes. Solving problems, rather than just complying with programs, should be rewarded.

4. Science for facts, process for priorities: Separate subjective choices from objective data gathering. Environmental science is complex and uncertainties exist in most scientific findings. In addressing scientific uncertainties that underlie most environmental issues and decisions, competing interests usually point to scientific conclusions supporting their view and ignore or attack conflicting or insufficient information. This situation

allows interests to hold polarized positions and interferes with reconciling the problems at hand. It may also leave stakeholders in denial over readily perceived environmental problems. This, in turn, reduces public confidence and raises the stridency of debate. Critical, preventive steps may never be taken as a result, and this may lead to more costly environmental protection than would otherwise be required.

A better approach is to reach agreement on the underlying facts as well as the range of uncertainty surrounding the environmental question at hand before trying to frame the choices to be made. This approach should use a public, balanced, and inclusive collaborative process and a range of respected scientists and peer-reviewed science. Such a process promotes quality assurance and quality control mechanisms to evaluate the credibility of scientific conclusions. It can also help stakeholders and decision-makers understand the underlying science and its limitations before decisions are made. If a collaborative process among the stakeholders does not resolve scientific disagreements, decision-makers must evaluate the differing scientific information and make the difficult policy choices. Decision-makers should use ongoing scientific monitoring information to adapt their management decisions, as necessary.

5. Markets before mandates: Replace command and control with economic incentives, whenever appropriate. Although most individuals, businesses, and institutions want to protect the environment and achieve desired environmental outcomes at the lowest cost to society, many environmental programs require the use of specific technologies and processes to achieve these outcomes. Reliance on the threat of enforcement action to force compliance with technology or process requirements may result in adequate environmental protection. However, market-based approaches and economic incentives often result in more efficient and cost-effective results and may lead to more rapid compliance. These approaches also reward environmental performance, promote economic health, encourage innovation, and increase trust among government, industry, and the public.

6. Change a heart, change a nation: Ensure environmental understanding. Governments at all levels can develop policies, programs, and procedures for protecting the environment. Yet the success of these policies ultimately depends on the daily choices of citizens. Beginning with the nation's youth, people need to understand their relationship with the environment. They need to understand the importance of sustaining and enhancing their surroundings for themselves and future generations. If America is able to achieve a healthy environment, it will be because citizens understand that a healthy environment is critical to the social and economic health of the nation. Government has a role in educating people about stewardship of natural resources. One important way for government to promote individual responsibility is by rewarding those who meet their stewardship responsibilities.

7. Recognition of benefits and costs: Make sure environmental decisions are fully informed. The implementation of environmental policies and programs should be guided by an assessment of the costs and benefits of different options across the affected geographic range. To best understand opportunities for win-win solutions, cost and

benefit assessments should look at life-cycle costs and economic externalities imposed on those who do not participate in key transactions. These assessments can illustrate the relative advantages of various methods of achieving common public goals. However, not all benefits and costs can be easily quantified or translated into dollars. There may be other non-economic factors, such as equity within and across generations, that should also be fully considered and integrated into every assessment of options. The assessment of options should consider all of the social, legal, economic, and political factors while ensuring that neither quantitative nor qualitative factors dominate.

8. Solutions transcend political boundaries: Use appropriate geographic boundaries for environmental problems. Many of the environmental challenges in the nation cross political and agency boundaries. For example, environmental management issues often fall within natural basins. These are often transboundary water or air sheds. Focusing on the natural boundaries of the problem helps identify the appropriate science, possible markets, cross-border issues, and the full range of affected interests and governments that should participate and facilitate solutions. Voluntary interstate strategies as well as other partnerships also are important tools.

Putting Enlibra to Work for New Mexico

By Cathy Tyson, Executive Analyst, New Mexico Environment Department

> *Whoso would be a man*
> *must be a nonconformist.*
> —Ralph Waldo Emerson

I mentioned earlier that I consider finding "unconventional leaders" key to the successful use of Enlibra on a truly contentious topic. (Basically if you are a conventional leader, you do it the way it's always been done. That's not likely to get you to new solutions to complex problems.) The statement above by Ralph Waldo Emerson—if you believe it—says a lot about a person. But for the sake of brevity, I am looking at it from a professional level, using these principles to guide us outside of our usual ways of thinking is—if there is such a thing—a pretty practical way to be a nonconformist.

Enlibra: Eight principles

1. National standards, neighborhood solutions
2. Collaboration, not polarization
3. Reward results, not programs
4. Science for facts, process for priorities
5. Markets before mandates
6. Change a heart, change a nation
7. Recognition of benefits and costs
8. Solutions transcend political boundaries

1. National standards: National standards for delegated programs should not include prescriptive measures on how they are to be met.
2. Collaboration: The old model of command-and-control, enforcement-based programs is reaching the point of diminishing returns, and also leading to polarization. Collaboration often brings greater satisfaction with outcomes, broader public support, and lasting productive working relationships. For successful collaboration, private and public interests must provide resources to support these efforts.
3. Reward results: Focusing on results should encourage federal and state policy makers to think "outside the box" in developing strategies.
4. Science for facts: It is best to agree on underlying facts about the environmental question at hand before trying to frame the choices to be made. Dueling Ph.D.s is a waste of precious time.
5. Markets: Market-based approaches and economic incentives that send appropriate price signals to polluters would result in more efficient and cost-effective results and may lead to quicker compliance.
6. Change a heart: If we are able to achieve a healthy environmental, it will be because citizens understand it is critical to the social and economic health of the nation.
7. Cost and benefit assessment should look at life-cycle costs and externalities.
8. Solutions transcend: Solutions may better be defined by the geography of certain markets or biological factors (e.g., air shed, watershed).

What Enlibra is: These are not really new things. It's just several principles of collaborative problem solving put in one package—Enlibra. The "toolkit" is more useful than any of the single tools.

What Enlibra is not: A rejection of the goals and objectives of the federal environmental laws, such as the Endangered Species Act or the Clean Water Act. The Enlibra doctrine specifically acknowledges the need and respect for appropriate federal regulation & enforcement.

Using Enlibra in New Mexico

- Policy
- New Mexico Water Summit: Enlibra workshop
- "Supporting better decision making on water issues in New Mexico"
- Green Zia Pollution Prevention Program
- Introducing Enlibra to state employees
- Leadership training
- Using Enlibra—challenges and support

I'll also share with you the Green Zia Pollution Prevention program, a program built on the premise that businesses will do the right thing (aka, work to prevent waste and pollution), if they are given the right framework for analyzing the problem and good tools for identifying solutions.

By the end of this presentation, I hope you'll see why I and so many others are excited about Enlibra and the Green Zia program, as tools for changing how we address envi-

ronmental problems. In the end, I believe the use of these tools will help us make better environmental decisions (i.e., do our jobs better = raise).

Policy supporting Enlibra in New Mexico
- Governor Johnson's endorsement
- Executive Order encourages use of Enlibra
- Executive Order requiring use of ADR
- Legislative endorsement
- ADR Bill: SB 262

Executive Order on Enlibra
- Endorses Enlibra
- Directs New Mexican environmental and natural resource agencies to incorporate Enlibra into policy making
- Encourages others to adopt the Enlibra principles
- Provides for training relating to Enlibra principles
- Incorporates Enlibra into appropriate natural resource projects.

I mentioned these policy and legislative documents earlier. I'll touch on the items I only mentioned earlier.

The Executive Order requiring the use of ADR was passed very recently. And while this doesn't mention Enlibra by name, it certainly puts tools in the hands of state employees.
- The ADR Executive Order by the governor requires an ADR contact for each executive agency;
- It requires the Agency coordinator receive a certain number of hours of basic training on ADR;
- Legislative endorsement of ADR keeps anyone from claiming this initiative is owned by either political party. (Democrats control the legislature, the governor is Republican.) As a result, it is unlikely that support for ADR would be easily dismissed as a "party" initiative regardless of who is in control of what part of the government.

Water Summit Impetus and Goals

Initiated by Governor Gary Johnson
- Goals
  1. Disseminate the Enlibra ethic and principles.
  2. An event setting off a process—facilitate the use of Enlibra in communities through out New Mexico.
  3. Address larger, underlying issues in water management.
  4. Develop a longer-term vision for, and establish better dealings in, water resource management.

Initiated by Governor Johnson
- Enthusiastic about Enlibra
- Desire to put Enlibra to use in what may be New Mexico's most critical concern—water.

- Goals:
  1. Get Enlibra in the hands of water planners so it can be used.
  2. The Water Summit is a starting point; the initiation and ongoing support for developing community-based partnerships. (FYI: Southwest Strategies hosted a workshop called "Community Based Partnerships for the Environment" held in May in Cloudcroft; I attended and it dovetails beautifully with the Enlibra principles. It provided more process training which supports the principles of Enlibra. In other words, it addressed how you hold successful community meetings and why some people resist collaborative processes—fear of compromise, etc.).
  3. Hope to develop 50-year (or longer) planning vision and process.

Enlibra: The Water Summit framework
- Definition: Moving toward balance.
- Function:
  1. Eight principles.
  2. Provide a balanced approach to help individuals, watersheds, communities, and states improve and expedite environmental decision making with:
     a. Increase velocity of environmental progress.
     b. Means for avoiding litigation.
- Not discrediting traditional tools—litigation, regulation

I spent three days talking about what Enlibra is and why it would be useful to them. Every time we talk about Enlibra, we explain that it' s not a new invention. These principles were developed by the governors and refined by a steering committee, and they are based on environmental successes (like the Coho Salmon in Oregon and the Regional Air Partnership dealing with haze over the Grand Canyon, and others). It's just a combination of principles that, if committed to, will yield better results faster.

Any public process probably relates to some of the principles. But—and here is the deal-clencher for me—developing a public process that is built upon these principles will probably be more well-rounded and develop "ground rules" that address tough concerns, and it will consider more factors and opportunities. In short, I think these principles are more likely to come to a higher middle ground.

- Definition: toward balance
- Function: (see above)
- Another function: moving land/nature stewardship back to the people; ultimately developing land stewardship as a social conscience.
- Not discrediting traditional tools—litigation, regulation

This is nothing new! It is the accumulation of several proven principles. These principles have been successfully used in the Regional Air Partnership dealing with haze over the Grand Canyon; the Coho Salmon and watershed restoration plans of Oregon, and numerous other collaborative environmental efforts.

Water Summit development
- Steering Committee guiding development
- Participants guide summit development
- Diverse representation—key legislators, acequias, irrigators, environmental advocates, farmers, planners, federal, state and local governments, and others
- Diverse concerns
- Developing topics and process—New Mexico Consensus Council (NMCC)
- Nonpartisan and limited affiliation
- MOU between environmental dept. and state engineer office
- NMED providing summit coordination

Steering Committee and subcommittees helped decide what to discuss and how to structure the conversations/sessions so that they were productive for attendees.

The NMCC was hired as a contractor to provide "process," or the how we have these conversations.

Steering Committee goals
- Not just another conference
- Diverse and broad participation.
- Work with other states, Mexico and tribes
- Help each other figure out how to make regional water initiatives work
- Provide introduction to water planning processes and issues
- Share information.
- Get both beliefs and misconceptions on the table
- Increase flexibility of planning process to address new and changing issues
- Focus on how conversations occur.
- Compliments existing initiatives (regional water planning)

Who should attend?
- Anyone who thinks they should
- Anyone who is interested in water use and planning
- Private land and business owners; ranchers, farmers
- Community members
- Acequia associations
- Nonprofit organizations; river and species advocates
- New Mexico, Texas, Colorado, and Arizona state agencies
- Mexican and tribal governments
- Water conservancy districts
- Regional water planning groups
- Local governments/water operators
- New Mexico state agencies
- Federal agencies
- New Mexico state agencies: governor's office; legislators; Environment Department; Energy Minerals & Natural Resources Dept.; State Engineer's office; Interstate Stream Commission; Game & Fish; Agriculture Department; Economic Development.

- Federal agencies: Dept. of Agriculture; Bureau of Land Management; Bureau of Indian Affairs; Environmental Protection Agency; National Labs; Fish & Wildlife; Forest Service; and others

Water Summit I Agenda

Water Summit Logistics
October 25 - 27, 1999, Albuquerque Convention Center
$45 - $125
(Held in conjunction with the New Mexico Environmental Health Conference October 25-27.)

Basic structure of the Water Summit

1. Introduction to Enlibra (1st day)
   After the principles were introduced, we had a rancher, a U.S. Forest Service district ranger, and an environmental advocate speak about examples of collaborative problem solving and stewardship in New Mexico. They spoke of the challenges as well as the successes.
2. Developing Enlibra skills (2nd day)
   The NMCC provided training on: running good meetings; envisioning your community's water future; strategic water planning; improving your negotiating skills; etc. Participants then practiced applying Enlibra to the problems surrounding the mythical Rocky Mountain Spotted Trout.
3. Applying Enlibra to water in New Mexico (3rd day)
   In eight concurrent roundtable sessions, participants applied Enlibra to different New Mexico water issues. Each group developed an action plan.

Water Summit critical elements

- Present Enlibra honestly
  —Challenges to using the principles
  —Not a panacea
- Acknowledge existing collaborative problem-solving and stewardship efforts.
- Meet the needs of New Mexico's water communities
  —Developed by committee
  —No predetermined results
- Listen to and act upon action plans developed by Water Summit attendees

- Present Enlibra honestly
  —Challenges to using the principles
  —We do almost anything to avoid change
  —We need unconventional leaders
  —Enlibra requires an up-front time investment
  —People with decision making power may need to share it

Water Summit results

- 250 people introduced to Enlibra
- Participants were instructed in Enlibra skills
  —Practiced applying the Enlibra principles
  —Applied the Enlibra principles to eight difficult New Mexican water issues
- Action plans were developed for eight New Mexican water issues
  One of the eight roundtable groups set another meeting to begin work on their action plan.
  —Four of the eight roundtables live on
- 250 people introduced to Enlibra
  —Participants instructed in "Enlibra skills" and given practice in apply the Enlibra principles
  —Participants applied the Enlibra principles to eight difficult New Mexican water is sues
- Action plans were developed for each of the eight New Mexican water issues
  —One of the eight roundtable groups set another meeting to begin work on their action plan.
- Support for post-summit work provided by LANL
- Participants acknowledged summit as a starting point
- State government recognized for:
- Trying different approaches to solve problems
- Listening to the community
- Building partnerships to solve difficult problems

Results of the summit are posted on the New Mexico Environment Department web site <www.nmenv.state.nm.us>.

The Environment Department has plans for a Water Summit II but can't reveal them; can only say our plans are dramatic and controversial, so we plan to use the Enlibra principles and a public process.

Using Enlibra in New Mexico

- Green Zia Pollution Prevention Program
- Inherent tie to Enlibra principles
- Reviewing "core values," including Enlibra principles where appropriate

Water Summit

- Three days to teach about Enlibra; provide some "tools" training; ask attendees to apply Enlibra to eight specific water problems in New Mexico. Result: eight action plans that hopefully address serious water concerns in a different manner than they have been addressed thus far.
- Follow-up work has happened through 1) state-agency lead; 2) other nonprofit groups using the action plans that resulted from the Water Summit; 3) possibly Water Summit II or other follow-up.

Green Zia Pollution Prevention Program

- Basics of Green Zia: team based; systems analysis; quality; Malcolm Baldrige; waste = lost profit.
- Inherently embraces Enlibra principles: localized solutions; favoring markets (or financial incentives) over mandates; team efforts (or collaboration) to solve problems, involving those closest to the issues; and more.
- This summer we will be reviewing the core values of the Green Zia program to further incorporate Enlibra where appropriate and beneficial for the program.

Most important

- GZ teaches specific process analysis tools to staff and management—tools for continuous improvement are embedded in the business.
- Environment is a business competitiveness issue; stresses integration into core business practices.
- Strive for excellence rather than focusing on minimum requirements.
- Push for sustainability, encourages stretch goals like zero waste, zero problems, for the next generation of environmental protection.
- Achieve better environmental results
- Dramatic reductions in air emissions, hazardous waste, solid waste, and water discharges.
- Dramatic reductions in energy, water and materials use.
- Cost savings of $46 million dollars.
  Company 1:
  —Reduction of secondary waste by 90%; cost savings of $1.3 million per year.
  Company 2:
  —Reduction in water use by 100 million gallons per year at a cost savings of $130,000 annually.
  —Reduction in VOC emissions by 90%; cost savings of $1,560,000 per year (one year pay back). Cost savings of $935,000 in chemical use in one year.
- Any many, many more!

The future of Enlibra in New Mexico

- Training state employees
  —Introduction
  —Leadership Training
- Participating in Southwest strategy
  —A community development and natural resources conservation and management effort by federal, state, tribal, and local governments
  —Collaborative; scientifically based; able to be implemented

Lastly, the leadership training: There are leadership trainings offered to employees of local government and they have been very successful. We believe that a leadership training opportunity for state employees has not existed and is now being sought. This training is still being developed by several state agencies and trainers from the local leadership programs, but here are the basics.

- First, it incorporates the Enlibra principles, much like the Green Zia Pollution Prevention Program does, at a “core values” level.
- This training will cost about $700 per person.
- People will have to apply for attendance, write a short essay on why they want to participate, and submit references.
- It will be held equally during working hours and weekends. This requires a commitment of personal time as well as state time.

Challenges to using Enlibra
- We do almost anything to avoid change.
- We need unconventional leaders.
- Enlibra requires an up-front time investment.
- People with decision-making power may be asked to share it.

My observations about collaborative decision making processes—challenges exist.

To avoid change, we:
- Avoid “real” issues
- Look for (and find) leaders who tell us what we want to hear
- Look for quick fix solutions to complex problems
- Look for technical solutions to adaptive problems: carbon monoxide exceedances; CO reduced through technical changes: oxygenated fuel—not changing driving habit, so now we are growing and the problem comes back.
- Blame others for the problem
- Look to authority figures and institutions to solve problems instead of solving them ourselves
- Unconventional leaders (some characteristics and actions of transformational leaders)
  —Are visionary; treat others with respect, understanding, caring, fairness
  —Initiate action, rather than being responsive
  —Will do almost anything to change the system
  —Appeal to core values
  —Exhibit unconventional behavior
  —Share decision-making power

Enlibra support Western Governors’ and National Governors’ initiatives
- Incorporate Enlibra into projects
- Identify where the principles are being used and where they could be used
- Provide tools and success stories
- WGA—Annual report on the doctrine and projects

If you are motivated to use Enlibra, but want case studies, resources on collaborative processes, or organizations that offer facilitators for meeting, etc.

1. Western Governors invite state, local and Native American leaders, environmental organizations, the private sector, Congress and the administration to embrace these principles.

2. WGA will work to incorporate the principles into its projects, and to help the states to identify existing collaborative processes and opportunities to develop.
3. Western states are looking for projects where the principles can be applied: for example, in NM Water Summit (toughest environmental issues, Enlibra is framework for Summit).
4. Publicize Western Governor's commitment to the Enlibra principles. Most if not all western governors will be issuing Executive Orders to encourage incorporation of Enlibra in state projects and into the bureaucracy.
5. WGA will provide an annual report on input about the Shared Doctrine for Environmental Management and the projects it has been used on.
6. Details of this and other WGA policy resolutions are posted: details available on Western Governors Association web site <www.westgov.org/enlibra>.

I leave you with a quote from Wallace Stegner. It motivates me to be very open to doing things differently. I hope it strike the same cord with you.

Philosophy of Sustainability

> ... one cannot be pessimistic about the West. This is the native home of hope. When it fully learns that cooperation, not rugged individualism, is the quality that most characterizes and preserves it, then it will have achieved itself and outlived its origins. Then it has a chance to create a society to match its scenery.
>
> —*The Sound of Mountain Water,* Wallace Stegner

The View from the Top Interior Department Officials: When ADR Is Appropriate and When It Is Not

Wednesday, May 17, 2000, 1:30-3:00 p.m.

Moderator

Robert Baum, Office of Hearings and Appeals, U.S. Department of the Interior, Washington, D.C.

Panelists

Mary Doyle, Acting Assistant Secretary of the Interior for Water & Science, Washington, D.C.

Kathrine Henry, Acting Director of Surface Mining, Washington, D.C.

Patrick Shea, Deputy Assistant Secretary of Interior for Land and Minerals Management, Washington, D.C.

Lori Williams, Special Assistant to the Director of the U.S. Fish & Wildlife Service, Washington, D.C.

Panel Abstract

In this panel, senior managers of the Department of the Interior agencies will candidly discuss when they believe ADR is appropriate for disputes that arise with their organizations and when the agency is unlikely to agree to ADR. For example, are there “core” issues that the agencies believe should not be settled? Are there certain types of cases where ADR should be standard operating procedure if negotiation fails? Will the agencies use ADR with everyone or are there types of parties on the philosophical spectrum with whom the agencies will not attempt an ADR process? The panelists will also discuss successes and failures in using ADR in their agencies and will provide guidance for how to request ADR within each agency. The panel will provide an opportunity for attendees to interact with high level policymakers from the agencies and to discuss with them what is working, what is not working, and what should be tried.

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Creative Thinking, Practical Innovations, and Future Opportunities for ADR at the U.S. Environmental Protection Agency

Wednesday, May 17, 2000—1:30-3:00 p.m.

Moderator

Rosemary O'Leary, Maxwell Graduate School of Citizenship and Public Affairs, Syracuse University

Panelists

David Batson, National ADR Coordinator, U.S. Environmental Protection Agency, Washington, D.C.

Carolyn Bordeaux, Maxwell School of Citizenship and Public Affairs at Syracuse University

Brian Polkinghorn, Department of Dispute Resolution at Nova Southeastern University

Susan Raines, Indiana Conflict Resolution Institute, Indiana University

Panel Abstract

The U.S. Environmental Protection Agency (EPA) has had a pioneering role in the promotion of environmental dispute resolution (EDR) techniques and programs. Each panelist will examine and discuss various aspects of EDR at the EPA. Susan Raines will compare the results of a survey of stakeholders involved in the use of EDR in enforcement cases, including potentially responsible parties, EPA enforcement attorneys, third-party neutrals, and ADR specialists at the EPA, applying some of the theories and advice commonly proffered in the dispute resolution literature. Brian Polkinghorn will present findings from a study conducted between 1990-94 and 1996-98 of the regulatory negotiation process (reg-neg) as it is utilized by the U.S. EPA. Carolyn Bordeaux will discuss issues of power and control among EPA attorneys and the ways in which these concepts influence the decision to use ADR. David Batson will then discuss the future of ADR at the EPA. Rosemary O'Leary will serve as panel moderator.

Individual Papers

Lessons Learned from Two Decades of ADR at EPA: A Letter to Carol Browner
By Rosemary O'Leary

Alternative Dispute Resolution of Enforcement Actions at the U.S. Environmental Protection Agency: Is Practice Consistent with the Theory?
By Carolyn Bordeaux, Rosemary O'Leary, and Richard Thornburg

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Lessons Learned from Two Decades of ADR at EPA: A Letter to Carol Browner

By Rosemary O'Leary, Syracuse University, and Susan Raines, Indiana University[1]

May 17, 2000
Carol Browner, Administrator
U.S. Environmental Protection Agency (EPA)

Dear Administrator Browner:

We are pleased with the recent announcement that EPA is planning to increase the use of alternative dispute resolution (ADR) techniques and practices across all agency programs.[2] For the purposes of this letter, we are focusing on ADR as a negotiation tool in which third party neutrals are called upon to aid parties' attempts to find a resolution to disputes related to enforcement activities at the EPA. First and foremost, we congratulate you and your staff on the success of your pioneering efforts in the field of ADR. In order to aid the EPA's continuing efforts to expand and improve its dispute resolution programs, we are sharing with you in this letter the thoughts and suggestions of program participants, using data collected from interviews with four key stakeholder groups (EPA attorneys, potentially responsible parties, EPA's ADR specialists, and professional third-party neutrals). From the insights of these stakeholders we offer our synthesis of the strengths and weaknesses of the program, as well as ten lessons learned. Administrator Browner, we hope these will be of assistance to you as you plan for the future of alternative dispute resolution at the EPA.

Previous Studies of ADR Used in Enforcement at the EPA

Mediation, early neutral evaluation, and other alternative dispute resolution techniques, are increasingly being used in federal agencies, commercial organizations, and among private citizens as a way to prevent and resolve disputes in a timely, cost-effective, and less adversarial manner. Table 1, on the next page, provides an historical overview of EPA ADR efforts beginning in 1981.

[1] The authors thank the U.S. Environmental Protection Agency, particularly David Batson, Senior ADR Specialist, and Lee Scharf, ADR Specialist and Program Coordinator, for their assistance with this research. The authors also thank the Hewlett Foundation for funding this research.
[2] ADRWorld.com (January 27, 2000); Federal Register, vol. 65, no. 49 (March 13, 2000). ADR in this context means the variety of approaches that allow parties to meet face to face to reach a mutually acceptable resolution of the issues in a dispute or potentially controversial situation (Bingham, 1986). It is often viewed as intervention between conflicting parties or viewpoints to promote reconciliation, settlement, compromise, or understanding (McCrory, 1981). This includes mere assistance from a neutral third party to the negotiation process (Bingham et al, 1987). Such assistance can be directed toward settling disputes arising out of past events, or can be directed toward establishing rules to govern future conduct (Eisenberg, 1976).

Table 1: Historical Overview of ADR at the EPA	
DATE	ACTION
1981	EPA Policy issued on involving the public in agency decisions
1983	EPA Regulatory Negotiation Project (RNP) established
1985	EPA Office of Enforcement piloted use of ADR in enforcement activities
1987	EPA issues guidance on use of ADR in enforcement cases, establishing the review of all enforcement actions for the potential use of ADR processes
1987	EPA Regulatory Negotiation Project expanded
1988	EPA issues contract for up to $1 million in third party neutral [facilitator, convener, mediator] services
1996	EPA Office of Solid Waste and Emergency Response begins to use ADR to resolve hazardous waste disputes
1996	EPA Office of Civil Rights piloted the use of ADR to resolve EEO complaints
1998	EPA appointed a Dispute Resolution Specialist
1999	EPA Conflict Prevention and Resolution Center established in the agency's ADR Law Office
1999	EPA issues contract for up to $41 million in third party neutral [facilitator, convener, mediator] services
2000	EPA issues interim statement of policy announcing the drafting of a final agency ADR policy

The literature on the EPA's use of ADR in the enforcement context is sparse. For example, Peterson[3] tracked and evaluated the early use of ADR in EPA's Region 5 and identified eight factors, listed in order of importance, used to explore the mediation potential of a Superfund case: EPA's willingness to litigate, identification of issues suited to mediation, timing considerations, nature of the parties to the dispute, number of parties and participation by nonparties, amount in dispute, and the ability of the parties to share mediation costs.

In 1990, Abbott[4] issued a somewhat cynical prognosis for the EPA's ADR program as applied to Superfund cases. Abbott documented several cases where the EPA successfully used ADR during the enforcement process, but found an overall reluctance on the part of EPA officials to use the ADR process as well as a fundamental distrust of settlement through ADR by potentially responsible parties (PRPs). Public issues, she concluded in part, were more likely to be resolved among the private parties themselves, without the EPA.

[3]Lynn Peterson, "The Promise of Mediated Settlements of Environmental Disputes: The Experience of EPA Region V", *Col. J. Envtl. L.* 327, 338 (1992).
[4]Heidi Wilson Abbott, "The Role of Alternative Dispute Resolution in Superfund Enforcement," 15 *Wm. & Mary J. Envt. L.* 47 (Fall, 1990).

Focusing on steering committees formed by PRPs at EPA enforcement sites, Charla and Perry summed up the pros and cons of using ADR in Superfund cases in the early 1990s as follows:

When properly utilized, a number of ADR techniques provide good results at sites, including equitable allocations of liability, competent development of facts, facilitation and mediation services, and savings of time and transaction costs. Negatives can be high expenses, protracted delays, work product of questionable quality, and failure to accomplish outcomes intended. . . .[5]

By 1995, Hyatt reported that ADR had become "virtually the norm [among PRPs] at [EPA] multiparty Superfund sites for resolving contribution claims."[6] Consistent with our findings, before they negotiate with the EPA, PRPs frequently use the services of a mediator and/or neutral cost allocator to help determine the percentage of the total settlement that each party should pay as part of any eventual settlement.

Our Research

In order to obtain a more up-to-date and comprehensive picture of the EPA's ADR activities as applied to enforcement, we conducted a four-part evaluation of these activities, gathering data between 1998-2000. This effort, funded by the Hewlett Foundation, utilized in-depth telephone interviews, government statistics[7], and archival records.[8]

The four groups examined were:

- EPA ADR specialists (18 out of 20, or 90 percent, were interviewed);
- PRPs to primarily Superfund cases (we interviewed a stratified random sample of 25);
- Third party neutrals used to convene, facilitate or mediate the cases (we interviewed 22 for a response rate of 69 percent[9]); and
- Agency enforcement attorneys who had participated in agency enforcement ADR processes (61, or 78 percent were interviewed).

[5]Leonard F. Charla and Gregory J. Parry, "Mediation Services: Successes and Failures of Site-Specific Alternative Dispute Resolution," 2 *Vill. Envtl. L. J.* 89 (1991).
[6]William H. Hyatt, Jr.. "Taming the Environmental Litigation Tiger," 5 *J. Envtl. Reg.* 91, 94 (Autumn, 1995).
[7]The primary source of statistics was U.S. EPA Enforcement ADR Program "Status Report on the Use of Alternative Dispute Resolution in Environmental Protection Agency Enforcement and Site-Related Actions" (December, 1999).
[8]The primary sources of archival records were U.S.EPA Office of Site Remediation records and Lexis consent decree files.
[9]The EPA sent us a list of 45 third-party neutrals. From this list, seven stated they had never served as a neutral on an EPA case, five could not be located due to a change of address, three declined, and seven could not be reached.

The overall goals of this project included:

- Evaluating the use of ADR at the EPA in enforcement cases, particularly in Superfund[10] cases;
- Examining the sources of both obstacles and assistance to ADR efforts at the EPA;
- Suggesting ways in which the EPA might improve its ADR programs; and drawing lessons from EPA's experiences that may be helpful to other agencies or organizations.

Levels of Satisfaction Among EPA Attorneys and Potentially Responsible Parties

There is a high level of satisfaction among those who have participated in EPA alternative dispute resolution processes in enforcement actions. Tables 2, 3, and 4 compare the satisfaction of the EPA enforcement attorneys interviewed with the PRPs interviewed in three general areas: satisfaction with the ADR experience, satisfaction with the mediators, and satisfaction with the outcome. While all the averaged answers to all the questions are in the "very satisfied" to "satisfied" range, a few interesting similarities and differences emerge.

Table 2: Satisfaction of EPA Enforcement Attorneys and Potentially Responsible Parties: Part I – The ADR Process

SATISFACTION WITH ADR EXPERIENCE	EPA ATTORNEYS	PRPS
INFORMATION YOU RECEIVED ABOUT THE ADR PROCESS	1.70	2.05
ABILITY TO PRESENT YOUR SIDE OF THE DISPUTE	1.43	1.23
AMOUNT YOU WERE ABLE TO PARTICPATE IN THE PROCESS	1.38	1.39
CONTROL YOU HAD OVER THE ADR PROCESS	2.17	2.17
ABILITY TO EXAMINE TECHNICAL AND SCIENTIFIC ISSUES	1.75	1.75
FAIRNESS OF THE PROCESS	1.51	1.22

1= very satisfied, 2= somewhat satisfied, 3= neutral, 4= somewhat dissatisfied, 5= very dissatisfied

[10]Superfund cases are hazardous waste cleanup cases, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

First, attorneys and PRPs show nearly identical scores in the areas of satisfaction with how much they were able to participate in the dispute resolution process (1.39 versus 1.38) and the control they had over the ADR process (2.17 for both). This high level of satisfaction bodes well for the future of alternative dispute resolution at the EPA, because previous studies have shown that attorneys are often reluctant to try ADR fearing it may reduce the amount of control they have over their case. One attorney interviewed, for example, remarked that "throwing a case before a judge" represented the ultimate loss of control, whereas mediation increases the amount of control attorneys and parties have, since resolution only occurs through consensus.

Similarly, both groups of attorneys agree that ADR increases the opportunity to discuss multifaceted issues (such as scientific and technical challenges) that often times are not addressed in litigation (1.75 for both). Since environmental disputes often involve highly technical scientific issues, the opportunity to examine and debate the scientific evidence in greater detail may be one of ADR's biggest advantages.[11]

Second, potentially responsible parties are less satisfied (2.05) than EPA enforcement attorneys (1.70) with the amount of information about ADR they were given prior to the mediation. One possible explanation is the "home court advantage" of EPA attorneys when participating in EPA sponsored enforcement ADR activities. In open-ended interviews, several EPA attorneys commented on how helpful the quality, dedicated staff at headquarters and in the regional offices had been. In the future, it may be advisable to provide the relevant PRPs and their attorneys with more information about ADR.

Third, PRPs are slightly more satisfied (1.22) with the fairness of the ADR process than are EPA attorneys (1.52). Based on other comments PRPs made in interviews, we surmise that the PRPs are comparing the fairness of the ADR process to litigation under the Superfund law. Under Superfund law a person or company that contributed even a small percentage of the pollutants to a site can be held liable for the entire costs of remediation. This law gives the EPA a "big stick" and is often seen as "unfair" by potentially responsible parties. PRPs may view mediation, and other forms of ADR, as more fair than litigation, as it often increases the range of settlement options and results in a higher level of understanding regarding the technical and legal constraints faced by all stakeholders.

Fourth, PRPs were more satisfied with the opportunity to present their side of the dispute (1.23) than were EPA attorneys (1.43). In open-ended questions the majority of PRPs interviewed explained that being able to tell their side of the story was one of the primary advantages of ADR in enforcement actions. Nonetheless, several enforcement attorneys lauded consensus decision making for forcing people to be reasonable through social pressure, thus reducing needless posturing.

[11]See Manring, Nancy J. 1993. "Reconciling Science and Politics in Forest Service Decisionmaking: New Tools for Public Administration" *American Review of Public Administration* vol.23 no.4:343.

Table 3: Satisfaction of EPA Enforcement Attorneys and Potentially Responsible Parties: Part II – The Mediator		
SATISFACTION WITH THE MEDIATOR	EPA ATTORNEYS	PRPS
MEDIATOR'S PREPAREDNESS	1.49	1.6
RESPECT MEDIATOR SHOWED YOU	1.28	1.36
KNOWLEDGE OF THE MEDIATOR REGARDING THE SUBSTANCE OF THE DISPUTE	1.79	1.56
MEDIATOR'S IMPARTIALITY	1.43	1.24
MEDIATOR'S SKILL AT OPENING UP NEW OPTIONS	1.96	1.68
MEDIATOR'S SKILL AT FINDING A RESOLUTION	1.81	1.58
MEDIATOR'S FAIRNESS	1.51	1.32
OVERALL SATISFACTION WITH MEDIATOR	1.60	1.45
1= very satisfied, 2= somewhat satisfied, 3= neutral, 4= somewhat dissatisfied, 5= very dissatisfied		

EPA attorneys are slightly more critical of mediators (1.60) than were PRPs (1.45). It is important to note that these scores reflect the mean average response, masking enormous variation, to be discussed later. While both groups were generally satisfied with the quality of the mediators, the most common concerns expressed by EPA enforcement attorneys dealt with quality control issues, noting that some mediators were young, inexperienced, and ill-uniformed about the law and science involved. This is confirmed in the quantitative scores, with the areas of concern exhibited by EPA attorneys being the "mediator's skill at opening up new options" (1.96), the "mediator's skill at finding a resolution" (1.81), and the "mediator's knowledge of the substance of the dispute" (1.79). Among the PRPs, the top three areas of concern are the mediator's skill at opening up new options (1.68), the mediator's preparedness (1.6), and the mediator's skill in working to find a resolution to the dispute (1.58). It must be remembered, however, that all of these scores still reflect average satisfaction levels that fall between "very" and somewhat" satisfied. The mediator's highest ratings were in the areas of respect towards participants (1.36 for PRPs and 1.28 for EPA attorneys) and fairness (1.32 for PRPs and 1.51 for EPA attorneys).

Table 4: Satisfaction of EPA Enforcement Attorneys and Potentially Responsible Parties: Part III– ADR's Outcome		
SATISFACTION WITH ADR'S OUTCOME	EPA ATTORNEYS	PRPS
SPEED OF RESOLUTION	2.38	1.92
OUTCOME COMPARED TO EXPECTATIONS BEFORE ADR	1.85	1.95
CONTROL OVER OUTCOME	2.19	2.30
IMPACT ON LONG-TERM RELATIONSHIPS OF PARTIES	2.17	1.75
THE EXTENT TO WHICH THE RESOLUTION WILL ENDURE	2.21	2.56
OUTCOME OVERALL	1.77	2.04
1= very satisfied, 2= somewhat satisfied, 3= neutral, 4= somewhat dissatisfied, 5= very dissatisfied		

The largest differences in satisfaction occur in reference to the outcome. Potentially responsible parties are less satisfied with the outcome overall (2.04) when compared with EPA enforcement attorneys (1.77). This is not surprising given the fact that the outcome for PRPs here usually means paying thousands, if not millions, of dollars. In response to an open-ended question, several EPA attorneys commented that they appreciated the flexibility in crafting solutions that came with EPA enforcement ADR processes. PRPs are also less satisfied with the control they had over the ADR outcome (2.30) than are EPA enforcement attorneys (2.19), again probably reflecting the differential power of these groups under Superfund law.

Interestingly, both groups of attorneys were less than "somewhat satisfied" concerning the "enduring resolution of the issues discussed, when compared with litigation" (2.56 for PRPs versus. 2.21 for EPA attorneys). While neither group is fully satisfied that ADR will result in truly enduring resolutions, PRPs are less satisfied than are EPA attorneys. On the other hand, PRPs are more content with the speed with which the dispute was resolved (1.92) than are EPA enforcement attorneys (2.38). This makes sense, as PRPs and their attorneys may feel more pressure to reduce "billable hours" and settle the dispute as quickly as possible.

PRPs also are more satisfied with the positive impact that the ADR process has on the long-term relationship of the parties (1.75 compared to 2.17 for EPA attorneys). As

attorneys from both sides often work together for years, even decades, on some Superfund sites, the potential benefits of improved and more cooperative working relationships should not be underestimated. From our work it is not clear, however, why PRPs feel more strongly than EPA attorneys that ADR has improved their working relationships with EPA attorneys.

Third party neutrals (mediators and cost-allocators, hereafter referred to as "neutrals") and the EPA's ADR specialists predicted that both groups of attorneys would be happy generally with the ADR option at EPA. Seventy-eight percent of the neutrals agreed or strongly agreed that participants were satisfied with the process, while seventy percent agreed or strongly agreed that participants were satisfied with the outcome. Similarly, seventy-one percent of the ADR specialists either agreed or strongly agreed that participants are satisfied with the process, as well as the outcome. Eighty-eight percent also agreed or strongly agreed that the ADR processes open up a wider range of options than traditional litigation and yield a greater understanding of the interests of the participating parties.

In sum, all four groups of participants interviewed were enthusiastic about the EPA's use of alternative dispute resolution and are generally satisfied with the use of ADR in enforcement actions. Many believe, however, that the EPA's ADR programs could get even better. From their comments we offer a list of ten lessons learned that may assist in ongoing efforts to improve ADR at the EPA.

Ten Lessons Learned

Lesson #1: Much can be learned by paying attention to the concerns and comments of third party neutrals.

Those most frustrated with the ADR enforcement program at the EPA are those who have served as third party neutrals. These individuals generally expressed strong support for the ADR processes utilized, but frustration with the EPA itself. The strong support of the third party neutrals for the enforcement ADR process at the EPA is evidenced by the fact that 83 percent agreed or strongly agreed that ADR processes utilized by the EPA provide forums to discuss multifaceted issues (such as scientific and technical challenges) that are often not addressed in litigation. Further evidence of their support can be found by the fact that 96 percent agreed or strongly agreed that ADR processes utilized by the EPA open up a wider range of options than traditional litigation. Eighty-seven percent agreed or strongly agreed that ADR processes utilized by the EPA yield a greater understanding of the interests of participating parties. Seventy-four percent disagreed or strongly disagreed with the statement, "the ADR processes utilized by the EPA are having little impact in settling environmental disputes."

Frustration with the EPA itself can be found in the neutrals' responses to close-ended questions, but this frustration comes through most clearly in their answers to open-ended questions. Thirty-five percent of the neutral professionals disagreed or strongly disagreed that ADR processes have the support of the majority of the EPA managers.

Only 26 percent of the same group agreed or strongly agreed with the same statement. This is particularly important as it is the middle-level managers who most directly affect the extent to which ADR programs are implemented. In the open-ended questions, a clear feeling of concern emerges. Table 5 overviews the array of comments from neutral professionals, in response to open-ended questions concerning their views of the EPA enforcement ADR program.

Table 5: Insights from Neutral Professions
"EPA was not prepared to participate in the spirit of ADR."
"EPA views neutral professionals as consultants for hire."
"The budget for neutrals is not fair."
"The EPA sends people to the table who do not have true decision-making authority."
"The key EPA decision makers are rarely at the table."
"When the EPA would send key decision makers, they had no motivation to settle."
"No EPA managers and supervisors were present, so I had to call EPA to check on whether the agreements we spent hours to craft would work. The answer was no."
"EPA often talks the talk, but doesn't walk the walk. EPA has a double standard. They expect understanding from other parties but fail to view themselves as a party required to be understanding of others."
"I can't tell you how many times I've heard from EPA managers that ADR is great and creative and wonderful but not for this case."
"The ADR process does not have support from the powers that be."
"The EPA culture does not embrace ADR."
"There is a lack of shared values within the EPA about the worth of ADR."
"The enforcement people at the EPA think ADR is unnecessary."
"The EPA will often set unrealistic timeframes for negotiators."
"The EPA tries to dictate who comes to the table."
"EPA sees itself as the most important party to the negotiation."
"EPA staff commit to mediation before understanding what it means."
"Cases with both EPA and the Department of Justice [DOJ] are nightmares. The DOJ is totally inflexible, right up to the form upon which agreements may be written. I've spent hours trying to get key DOJ decision makers on the phone to sign off on an agreement."
"The EPA doesn't know how to handle conflicts when the federal government is a PRP."
"The EPA would often lose interest in a case once it started."
"Top management at the EPA supports ADR, while middle management is a mixed bag."
"The EPA has a strong tradition of being cautious, particularly in policy development. Issues must go up and down a chain of command which makes process lengthy."
"There are major problems getting EPA management to be responsive."
"There may be a lack of incentives for EPA managers to use ADR."
"EPA does not evaluate whether ADR is appropriate."

Lesson #2: There is a need for consistent quality among mediators.

The previous discussion of mediator quality revealed overall high levels of satisfaction with the mediators, but this level of satisfaction was based on a mean average of the responses, thereby masking some troubling variation in mediator quality. PRPs commonly complained that some mediators were not adequately knowledgeable about the substance of dispute. Several pointed to young and inexperienced mediators who could not handle aggressive attorneys with strong personalities. Others commented that EPA should invest in the best mediators. A majority (65 percent) of the PRPs said that their willingness to participate in future ADR efforts hinged on the choice of the neutral.

Similarly, EPA enforcement attorneys uniformly said they want mediators who are strong, prepared, and informed, with consistent skill levels. The future success of alternative dispute resolution in enforcement cases at the EPA partially hinges on the ability to find consistently high quality mediators.

Lesson #3: Stronger educational efforts are needed within EPA to educate managers about the basics of ADR.

EPA enforcement mediators reported strong support from top EPA management, but far from adequate support from EPA middle management. Specific problems mentioned included:

- Some managers do not understand what ADR is and what it is not;
- The staff at EPA sometimes commit to ADR without understanding exactly what is involved.
- Middle managers and staff outside of the ADR office are not adequately considering ADR when it might be appropriate; and
- Technical people, who often wrote the regulations, sometimes oppose ADR because it was not envisioned when the rules were promulgated.

The most successful use of ADR in EPA regional offices often stems from the commitment of certain enthusiastic key staff persons, rather than an overall institutionalized evaluation of when and where to use ADR. This point is supported by the 1997/1998 ADR Status Report, which shows that about one-third of the EPA regions are responsible for the vast majority of cases in which ADR is used, while another third rarely use it at all.[12] While many cases settle without the assistance of outside neutrals, clearly the regional variation points to the possibility that there is room for the increased use of ADR in some, if not all, regions.

There are, however, a number of barriers to increased use of ADR. For example, some lawyers reported, “If I can win, why mediate?” Other attorneys reported that there is a perception that using ADR is a sign of a weak case. Still others reported a fear of loss of control over their case once in the ADR process. Some attorneys also are concerned that asking for a mediator will be a sign that they need help as a lawyer/negotiator. Several mediators, as well as PRPs, mentioned that EPA and Department of Justice

[12]U.S. Environmental Protection Agency, December 1999. “Status Report on the Use of Alternative Dispute Resolution in Environmental Protection Agency and Site-Related Actions.”

attorneys were forced into mediation by a judge. Much of this reluctance stems from traditional law school education where attorneys are taught that to represent their clients' interests zealously they must act in an adversarial fashion. Mediation, and other forms of ADR, call for a cooperative attempt at problem-solving that may be new and unfamiliar to attorneys trained in traditional adversarial methods, despite their knowledge of negotiation.

The EPA should consider studying those regions in which ADR is having the most success in order to better understand what other regions can do to improve their use of ADR. This can be implemented while still respecting regional variations. Success stories need to be advertised. Education across all EPA boundaries is needed. The majority of those interviewed expressed a need and interest in further ADR training. To their credit, nearly all of the EPA attorneys we talked with had received some ADR training. Only 14 percent stated they had not received any ADR training. In contrast, 67 percent of PRPs stated they had not been trained in the use of ADR. Since the respondents in this study had taken part in one or more ADR processes, this group was more likely to have been trained than those attorneys who have never given ADR a try. For ADR to be a success at the EPA, stronger educational efforts are needed, especially those focusing on attorneys who have never used ADR and middle-level EPA managers. While the EPA is not responsible for training private party attorneys, they should be aware of the lower levels of training this group exhibits. In order to encourage the full and successful participation of PRPs and their attorneys, the EPA might consider increasing its efforts to inform and educate PRPs at the time ADR is proposed.

Lesson #4: A neutral roster of easily accessible mediators, not paid for exclusively by EPA, is needed.

In 1988 EPA issued a contract authorizing up to $1 million in neutral services over three years. The most recent contract, issued in 1999, has a ceiling of more than $41 million. While the intent of these EPA contracts is to provide dispute resolution services from outside the agency, the perception of the intent differs. First, many of the EPA enforcement attorneys and PRPs interviewed thought the EPA selected the mediator in their case, rather than having the mediator selected by a neutral entity (e.g., 30 percent of EPA attorneys stated that EPA headquarters chose the mediator in their case).

Second, 58 percent of the potentially responsible parties stated that the mediator's neutrality is best assured when all parties share the costs of the mediator, including the EPA. Typically, these respondents stated that sharing the costs of mediation showed a commitment to the process and constitutes a sign of good faith. Twenty-five percent of PRPs, generally those representing smaller companies, preferred that the EPA pay the costs of mediation. Another 21 percent felt that it didn't matter who pays for the mediation since the cost of mediation is generally so small in comparison to overall litigation and settlement costs.

In an effort to provide the services of an outside neutral in cases where funds are unavailable, the EPA has occasionally used "in-house" neutrals. These in-house neutrals

are EPA staff, trained in mediation, with no direct connection to the particular case. Eighty-three percent of the PRPs stated that in-house neutrals would not be acceptable to them. Concerns included skepticism about the EPA staff's "credibility," neutrality," and "confidentiality." One respondent stated that an in-house neutral would be "laughed out of the room." Still another noted that the EPA staff is already overwhelmed and would not be able to devote the time necessary to the mediation. In defense of in-house neutrals, three of the respondents had participated in mediations that used an in-house neutral and all three stated that their initial skepticism was overcome by the mediator's skill and demonstrated neutrality. Additionally, two respondents stated that in-house neutrals would be "better than nothing."

Third, a number of problems concerning the mediator contracting process became evident. Even the third party neutrals disliked the contracted arrangement. Mediators hired pursuant to the first contract indicated a feeling that they were considered "EPA consultants, " not neutral professionals. Several mediators reported that EPA tried to dictate who was at the table. Finally, EPA enforcement attorneys reported that the contracting process to obtain a mediator was slow, bureaucratic, and cumbersome. The red tape involved in putting together a mediation often makes ADR an undesirable option.[13]

Rather than contract for these services, a neutral roster of easily accessible mediators, not paid for exclusively by the EPA, is needed. In-house mediators should be used only when the parties cannot or will not pay their share of the costs of providing an outside mediator. In cases where an in-house mediator is used, the EPA should take great pains to ensure that the individual is as neutral as possible and that confidentiality is maintained.

Lesson #5: Assistance is needed to help nonprofits, community groups, and deminimus PRPs[14] participate in ADR efforts.

The majority of PRPs interviewed wanted more ADR in enforcement actions. They generally see ADR as a way to get the EPA's attention and to tell their side of the story. They also perceive the process as fairer and faster than traditional Superfund litigation. Further, PRPs want to be trained in ADR in order to minimize power differences at the table due to ADR knowledge differentials.

When non-profits, community groups, and deminimus PRPs participate in EPA enforcement ADR efforts, they express a need for outside technical support that is not needed by the large corporate and governmental parties to the dispute. While current EPA grant programs for communities and nonprofit groups are commendable, they are insufficient. Additional funds are needed to assist these groups in participating fully and equally in EPA enforcement ADR programs. Increased participation by these groups improves not only the outcome of the ADR process, but also lends legitimacy to environmental decision making processes.

[13]Current managers in EPA's enforcement ADR program office report that these contracting difficulties have been addressed and the turn-around time for hiring a mediator is two weeks as of April 15, 2000.
[14]The term "diminimus PRPs," generally, refers to parties that contributed only a small percentage of the total pollution at a Superfund site.

Lesson #6: An established referral mechanism for determining whether ADR is appropriate is needed.

In 1987 EPA issued a "Guidance on the Use of Alternative Dispute Resolution in EPA Enforcement Cases" establishing, in part, "the review of all enforcement actions for the potential use of ADR processes." Yet in the year 2000, such a comprehensive review is nonexistent. Thirteen out of 18 ADR specialists, for example, indicated that the review process in their region was ad hoc, informal, and dependent upon the ADR views of the regional counsel or the persuasive abilities of the ADR specialists. This could, in part, account for the enormous discrepancy among regions concerning the percentage of cases that use ADR.[15]

EPA attorneys expressed a concern about the inadequate screening of cases, which particularly is problematic when cases that are not "ripe" go to ADR. Further, some cases simply are not amenable for environmental ADR. Finally, the majority of enforcement ADR cases are Superfund cases. If a comprehensive review of all enforcement actions for the potential application of ADR truly were implemented, a more balanced array of ADR enforcement cases might emerge. The time for an institutionalized review process has come.

Lesson #7: EPA needs to evaluate continually its ADR efforts.

One-half of the EPA attorneys interviewed knew of no evaluations of enforcement ADR efforts at the EPA. Most said they had no opportunity to evaluate the process or the neutral professional used in their case. In addition, both PRPs and ADR specialists expressed a desire to evaluate the EPA's enforcement ADR process and program, respectively. Greater evaluation efforts can only strengthen EPA's ADR efforts.

Lesson #8: EPA needs to take advantage of the growing demand for ADR from PRPs.

Nearly all the PRPs expressed strong support for ADR processes, but their views of EPA's actions in the area of enforcement ADR were split. Concerning ADR processes in enforcement actions, there is a perception among PRPs that ADR saves money in transaction costs and resolves the dispute more quickly than litigation. There also is a perception that they "get a better deal" through alternative dispute resolution. PRPs uniformly reported feeling that they have more control over their case when they use ADR. Finally, PRPs reported that ADR helped them control their risks and gave them a chance to educate the EPA. If the mediators are strong and skillful, most would use ADR again.

Concerning the EPA's performance and treatment of them in the ADR process, views were mixed. Approximately one-half of the PRPs stated that the EPA was not helpful in setting up or assisting the ADR process. Some said the EPA encouraged the parties to

[15]U.S. Environmental Protection Agency, December 1999. "Status Report on the Use of Alternative Dispute Resolution in Environmental Protection Agency and Site-Related Actions."

use ADR but did nothing more. Others said the EPA was less flexible in ADR than they should be. Still others felt that they were poorly or badly treated by the EPA.

However, the other half of the PRPs were effusive in their praise for the EPA. For example, one PRP attorney said, "David Batson [Senior EPA ADR Specialist] and his crew are very skillful at bringing parties together and getting ADR started." Yet another praised David Batson's shop for providing a conflict assessment and seed money to get the ADR effort started. Others indicated that if it were not for the EPA, their ADR negotiations would never have happened.

Lesson #9: An evaluation of ADR efforts initiated by administrative law judges is needed.

While we did not plan to evaluate the relatively new ADR program offered through the Office of the Administrative Law Judge (OALJ), a number of EPA attorneys had very strong feelings about this program and urged us to draw attention to some potential problems. As we only received information about this program from twelve EPA attorneys, however, our sample size is too small to allow firm conclusions to be drawn, but is large enough to suggest further evaluative work concerning this program.

Since 1996, the number of EPA cases using ADR has skyrocketed, going from approximately 18 cases in 1995 to 116 cases in 1998. This increase is largely due to the creation of an ADR program through the Office of the Administrative Law Judge. According to the 1997/1998 EPA ADR status report, this program "has now become the ADR process EPA enforcement personnel participate in most frequently."[16]

According to EPA attorneys, in this program an Administrative Law Judge acts as a mediator in order to try to encourage settlement by the parties. Mediations are generally conducted over the phone, with the judge speaking to the parties separately and/or all together. Rather than being confined to Superfund cases, any case filed with the OALJ may be a candidate for mediation. If the case doesn't settle, a different ALJ is appointed to hear the case. Approximately 77 percent of these cases result in settlement, while non-ALJ mediations have a 79 percent settlement rate.[17]

While the majority of respondents stated they were either somewhat or very satisfied with this program, a number of concerns came up repeatedly. For instance, some attorneys mentioned that the ALJs often conduct the mediations without spending much, if any, time preparing themselves by learning about the case history and issues. Others mentioned that it is difficult for ALJs to "switch hats," changing from their typical roles as authoritative decisionmakers to mediators involved in consensus decisionmaking. Others felt pressured to settle out of a belief that the ALJ may become biased against them in future interactions.

[16] *ibid.*
[17] *ibid.*

Overall the OALJ ADR program is likely to widen and improve the dispute resolution options available to both EPA and private party attorneys. However, a comprehensive evaluation of this program is called for in order to ensure that these concerns are addressed.

Lesson #10: For ADR to be successful, it must be part of the dominant culture at the EPA.

Despite the fact that the EPA's Interim Statement of Policy on Alternative Dispute Resolution states that "it is the policy of the Environmental Protection Agency to work to prevent disputes and to use ADR techniques where appropriate. . ."[18] ADR is not part of the day-to-day business of the EPA. Rather, it is the exception to the rule. As one mediator put it, it is as if the EPA has a split personality: David Batson's shop is promoting ADR while many EPA attorneys are fighting it. From our interviews it appears that a small percentage of EPA attorneys have incorporated ADR into their dispute resolution repertoires, while most others have not yet given it a try. If this impression is accurate, the decision to use or not use ADR is based more on an individual attorney's familiarity with the ADR process than with the needs of the particular case. And, as mentioned earlier, support from middle-level managers is inconsistent at best, nonexistent, at worst.

Conclusion

There is a need, Administrator Browner, for you to show a stronger internal commitment to ADR. Further, there is a need for a comprehensive agency policy that will assess and encourage the use of ADR across the Agency's programs and regions, which is why your recent pronouncements are hopeful. We realize, however, that ADR is not a panacea. Every case does not need a mediator in order to settle, and not all cases are amenable to ADR. Further, while it may be argued that ADR should not be institutionalized in a regulatory agency whose job is to enforce environmental laws, there will always be a portion of cases for which ADR is appropriate. At the very least, ADR should be institutionalized for that percentage of appropriate cases.

We hope that you will consider additional incentives to EPA managers to use ADR. At the present time, the program is dependent on those who have the personal interest in ADR and the personality to persuade others to use it. We urge you to support those who support ADR. ADR at EPA has tremendous untapped potential.

[18]Federal Register, vol. 65, no. 49 (March 13, 2000).

Alternative Dispute Resolution of Enforcement Actions at the U.S. Environmental Protection Agency: Is Practice Consistent with the Theory?[1]

By Carolyn Bordeaux, Rosemary O'Leary, and Richard Thornburg, Syracuse University

Conflict and crisis are among the few constants at the U.S. Environmental Protection Agency (EPA) since its inception in 1970. Industry's relentless attacks on command-and-control regulations, environmentalists' stiff opposition to any perceived weakening of standards, and widespread public mistrust have plagued the agency. Faced with this growing balkanization among its constituencies, perhaps it was only natural for EPA to be one of the first federal agencies to embrace dispute resolution as a new tool to manage conflict more productively. EPA adopted alternative dispute resolution (ADR) in an early form in 1981, after observing its success in several local controversies during the 1970's.

By 1985, EPA's Office of Enforcement had piloted the use of ADR to assist in the resolution of enforcement actions. In 1987 EPA issued a "Guidance on the Use of Alternative Dispute Resolution in EPA Enforcement Cases" establishing the review of all enforcement actions for the potential use of ADR processes. Now, two decades after initial discussions concerning the use of ADR at the EPA, the agency has a solid track record in applying ADR to a wide range of disputes, especially enforcement actions, and has emerged as the leader among federal agencies. As such, it provides a useful setting for testing conventional wisdom and theories about ADR. This paper compares the findings of an assessment of the EPA's enforcement ADR program, funded by the Hewlett Foundation, with theory found in the ADR literature in four key areas:

- Why parties to a dispute choose ADR;
- Key elements needed for the successful resolution of environmental conflicts;
- Important characteristics of mediators in successfully resolved environmental disputes; and
- Whether the number of parties at the table affects the outcome of the mediation.

This research was carried out from 1998 to 2000, utilizing in-depth telephone interviews, government statistics,[2] and archival records.[3] The four groups examined were

- EPA ADR specialists (18 out of 20, or 90 percent were interviewed);
- Potentially responsible parties (PRPs) to primarily Superfund cases (we interviewed a

[1]The authors thank the staff of the U.S. Environmental Protection Agency, especially David Batson, EPA Senior ADR Specialist, and Lee Scharf, ADR Specialist and Program Coordinator, for their assistance with this research. The authors also thank the Hewlett Foundation for providing the funding for this research.

[2]The primary source of statistics was U.S. EPA Enforcement ADR Program, "Status Report on the Use of Alternative Dispute Resolution in Environmental Protection Agency Enforcement and Site-Related Actions" (December, 1999).

[3]The primary sources of archival records were U.S. EPA Office of Site Remediation records and Lexis consent decree files.

stratified random sample of 25);
- Third party neutrals used to convene, facilitate or mediate the cases (we interviewed 22 for a response rate of 69 percent[4]); and
- Agency enforcement attorneys who had participated in an EPA enforcement ADR process (61, or 78 percent were interviewed).

The Literature

The essence of environmental dispute resolution (EDR)[5] is face-to-face meetings of parties who have a stake in the outcome of the matter to reach consensus on a solution which best satisfies their interests. Based on the extant literature, O'Leary *et al*. have identified five principle elements of EDR: 1) the parties agree to participate in the process, 2) the parties or their representatives directly participate, 3) a third party mediator helps the parties reach agreement, but has no authority to impose a solution, 4) the parties must be able to agree on the outcome, and 5) any participant may withdraw and seek a resolution elsewhere (O'Leary *et al.*, 1999).

The literature is ripe with normative pleas to increase the role of the lay public and interested stakeholders in the resolution of environmental disputes. One author, for example, argues that such participation in the resolution of water conflicts in the western U.S. is a fundamental tenet of our democratic government (Waller, 1995). Other literature focuses on problems that might be more amicably and more efficiently resolved through ADR. For instance, one author argues that the use of alternative dispute resolution techniques could greatly improve the management of Superfund cleanups (Whitman, 1993). A study of intergovernmental conflict stemming from state law regulating solid waste in North Carolina concludes that state and local governments may be able to positively resolve such disputes by adopting a problem-solving stance and searching for win-win results (Jenks, 1994). Finally, the EPA's Office of Site Remediation writes in one of its publications that there are several benefits of ADR in its environmental enforcement actions: lower transaction costs, a focus on problem solving (as opposed to positioning), the generation of settlement options that are more likely to be tailored to stakeholders' needs, and the saving of time (U.S.EPA, 1995).

Describing ADR as a more effective problem-solving or policy-making method than alternatives such as litigation or traditional rule-making procedures is a common theme. There are, however, insufficient analyses of environmental dispute resolution efforts generally, and no comprehensive studies of EDR used in enforcement actions at the U.S.EPA. Examples of solid, yet limited, existing analysis that do not include EPA enforcement ADR are deHaven-Smith and Wodraska (1996) who examined consensus-building in integrated resources planning within the Metropolitan Water District of Southern California; Kerwin and Langbein (1995) who analyzed negotiated rulemaking at EPA; Fiorino (1988) who looked at regulatory negotiation as a policy process at the

[4]The EPA sent us a list of 45 third-party neutrals. From this list, seven stated they had never served as a neutral on an EPA case, five could not be located due to a change of address, three declined, and seven could not be reached.)

[5]EDR and ADR are used interchangeably in this paper.

EPA; Blackburn (1988) who examined environmental mediation as an alternative to litigation; and Perritt (1986) who analyzed the use of ADR techniques in negotiated rulemaking. There are also public administration scholars who have examined generic conflict resolution techniques (see, e.g., Lan, 1997). Thus, while the literature has generally advocated EDR as a public management response to the problem of environmental conflict, broad studies assessing the lessons from these programs are scarce.

EDR AT THE EPA

The EPA has experimented with a wide spectrum of EDR applications. To better understand how enforcement ADR fits in this picture, we first review the full spectrum. EPA ADR applications can be understood as differing along two dimensions: their scope and their objectives. One dimension considers whether the scope of the dispute is "site-specific" (i.e., limited to a particular resource, location or situation) or whether it is "policy level" (i.e., it applies more generally to a class of resources, locations, or situations). The other dimension analyzes whether the objective is a formal decision (parties have the legal and political authority to make and implement the decision) or a recommendation to decision makers. Figure 1 represents this two-dimensional continuum. Figure 2 classifies EPA's use of EDR in this continuum.

Figure 1—Classifying EDR Applications

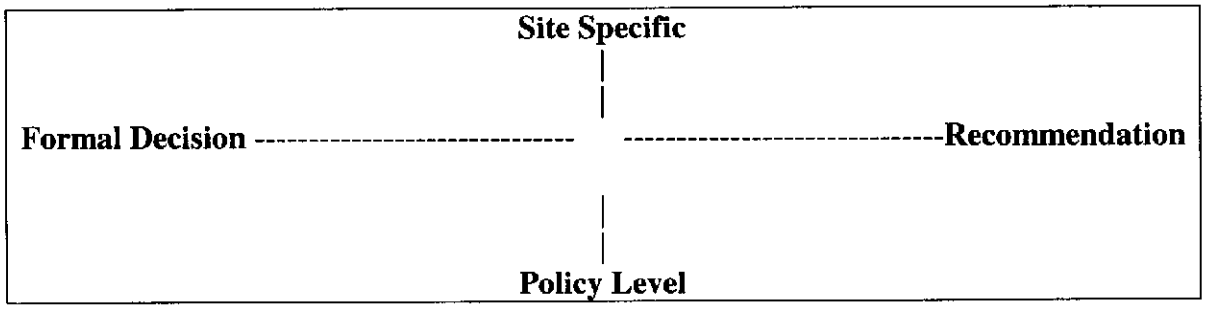
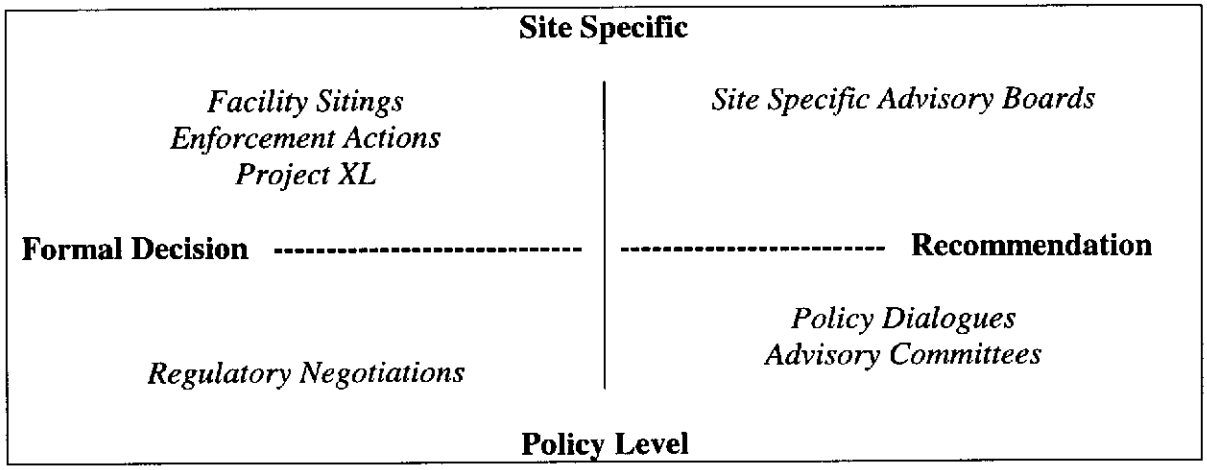


Figure 2—EDR Applications at EPA



EPA now has the most extensive and systematic approach to EDR of any federal agency. Several different offices in headquarters coordinate dispute resolution assistance for the agency. In October 1998 EPA created the position of "Dispute Resolution Specialist." In November of 1999, the establishment of a Conflict Prevention and Resolution Center was announced. The center is now part of the agency's ADR Law Office that serves as EPA's national ADR policy and coordination office. In addition, the agency has an Office of Enforcement and Compliance Monitoring ADR program, as well as ombudsman programs in several regional and headquarter offices. In striving for a "simple and easily accessible process," the regional offices are designated as the primary point of contact for parties seeking dispute resolution (Cooke, 1999).

EPA has been working to develop and implement a comprehensive EDR policy for site-specific enforcement actions[6] (EPA, 1995). In 1985 the EPA's Region V volunteered to establish an ADR Pilot Project for Superfund cases. From the pilot, agency staff identified eight factors, ordered roughly by importance, for evaluating the mediation potential of a Superfund case: EPA willingness to litigate, identification of issues suited to mediation, timing considerations, nature of the parties to the dispute, number of parties and participation by nonparties, amount in dispute, and the ability of the parties to share mediation costs (EPA, 1995: 346). In 1987, EPA deemed the pilot a success and began to use ADR in more cases throughout its regions. The 1987 "Final Guidance on Use of Alternative Dispute Resolution in EPA Enforcement Cases" allowed the use of mediation, arbitration, fact-finding, and mini-trials (Cooke, 1999).

In 1990 Abbott found that although ADR held great promise for Superfund enforcements, it had slim chances of being successfully utilized (Abbot, 1990). Due to the reluctance of EPA officials to use the process and the potentially responsible parties' (PRPs') "fundamental distrust of the settlement process," Abbott doubted that Superfund EDR would live up to its promise (Abbot, 1990: 64). She documented several cases of successful EDR, including one mediation, four arbitrations, and one mini-trial (Abbot, 1990: 48-52). She found, however, theoretical and pragmatic problems with the process because "public issues are resolved in part by private parties," and "the EPA's ability to write contribution protection into consent decrees with settling PRPs may present serious constitutional questions as to the rights of nonsettling PRPs" (Abbot: 1990, 64).

Charla and Parry found that using EDR at Superfund sites had both positive and negative implications for PRPs (Charla and Parry, 1991). At many sites, PRPs had formed steering committees to discuss and resolve problems such as negotiating consent decrees or administrative orders with the government, performance or supervision of a surface removal, and cost allocation among the parties. Innovative committees had employed a third party neutral to perform binding or non-binding arbitration to resolve allocation and other issues (Charla and Parry, 1991: 92-93). According to Charla and Parry:

[6]Enforcement actions eligible for EDR include those filed pursuant to the Comprehensive Environmental Recovery Compensation and Liability Act (CERCLA, also know as Superfund), the Resource Conservation Recovery Act (RCRA), the Clean Water Act and the Oil Pollution Act.

> When properly utilized, a number of ADR techniques provide good results at sites, including equitable allocations of liability, competent development of facts, facilitation and mediation services, and savings of time and transaction costs. Negatives can be high expenses, protracted delays, work product of questionable quality and failure to accomplish outcomes intended by the steering committee (1991: 97).

Consequently, the authors determined it was important for PRP steering committees to carefully weigh their needs and select the proper ADR technique.

In the mid-1990s, ADR gained more widespread acceptance and application in enforcement cases. The Office of Enforcement issued a policy memorandum in 1993 to its regional offices encouraging the use of ADR, particularly arbitration, for recovery claims where the amounts of pollutants contributed by each party were generally small (known as "de minimus settlements") (Diamond, 1993). By 1995 when the agency issued a comprehensive policy for ADR in enforcement actions, it had used ADR in over 50 enforcement-related disputes ranging from two-party Clean Water Act cases to Superfund disputes involving up to 1200 parties[7] (EPA, 1995). EPA developed an Allocation Pilot Program in 1995 under the Superfund Administrative Reforms. The allocation pilot used consultants to assign shares of responsibility to PRPs while EPA assumed responsibility for the "orphan share" (i.e., shares of parties that are defunct, insolvent, or missing) (Koyasako, 1998). According to Hyatt (1995) ADR became "virtually the norm at multiparty Superfund sites [among private party PRPs] for resolving contribution claims" (Hyatt 1995).

Comparing Theory and Practice

Implementing an ADR policy for enforcement cases at the EPA has not been an easy task, and as such provides an interesting window into the use of conflict resolution techniques to resolve environmental (and other) disputes. While the literature on EDR is growing, few of the recommendations and assertions found in the literature have been tested or compared with cases outside those described in the article in which they were originally reported. The following sections compare the reality of the EPA's enforcement ADR program with the theories found in the literature.

Why Do Parties to an Environmental Dispute Choose Alternative Dispute Resolution?

A fundamental issue in the literature concerns the incentives of parties to a dispute to use a dispute resolution process. There is debate about whether or not mediation, for example, is more cost effective and faster than litigation. There are many assertions that ADR is more cost-effective and speedier than litigation both for the government and for the private sector (Anderson, 1985; Ryan, 1997). On the other hand, others caution that while litigation is more expensive, mediation should not be seen as a free ride. In extremely complex cases, the process of mediation takes time and thus money (Dean,

[7]EPA had also established an ADR Headquarters Team and ADR specialists in each Region to provide staff support and training. In addition, a contract with RESOLVE made ADR services readily available. For additional insights and research on Superfund ADR, see Gilbert (1989).

1998). Others, however, have disputed the view that mediation is less costly or faster at all, claiming that "traditional litigation is actually less costly and time-consuming because clear rules and precedents are established which preclude later litigation" (Abbot, 1990, citing Brunet). Similarly, a Rand Corporation Study of ADR in federal district court cases found "no strong statistical evidence that the mediation or neutral evaluation programs . . . significantly affected time to disposition, litigation costs or attorney views of fairness. . ." (Kakalik, 1997). Yet another view is that private parties make the decision to mediate based on an overall cost-benefit analysis predicting the chance of overall loss or gain from going to court plus the transaction costs of litigation or mediation (Steenland, 1996).

Our research supports several streams of this literature. Concerning ADR processes in enforcement actions, there is a perception among PRPs that ADR saves money in transaction costs and resolves the dispute more quickly than litigation. There also is a perception that they "get a better deal" through ADR than they would through traditional Superfund litigation. PRPs uniformly reported feeling that they have more control over their case when they use ADR. Finally, PRPs reported that ADR helped them control their risks and gave them a chance to educate the EPA.

The preference for ADR over litigation could be associated with the particularly high litigation costs of CERCLA and the low possibility of a successful court outcome for PRPs. However, another study of a range of environmental mediation efforts found that participants generally found one of the central contributions of mediation was a reduction in time, delay, or cost (even when mediation was ultimately unsuccessful) (Buckle 1986).

While the PRPs seem to have a set of cost-benefit reasons for wanting to mediate, the incentives for the EPA are much more ambiguous. One of the more interesting assertions about whether or not a party is willing to mediate relates to power differences. In particular, some have theorized that when there are power differences, it is less likely that parties will mediate—those who have more power simply have no incentive to go to the table (Abbot, 1990, citing Riesel), while those without power will not want to mediate in a situation where they are at a disadvantage (Amy, 1987; Nader, 1995). The Superfund laws give the EPA broad enforcement authority with standards such that it is very difficult to defeat the EPA in court (Abbot, 1990). However, researchers have suggested many reasons that the EPA should have an incentive to mediate, including: saving the legal departments and taxpayers time and money (Abbot, 1990), meeting Congressional demands for an increased number of clean-ups (Anderson, 1985), or simply following the Executive Order No. 12778 to attempt settlement and offer ADR prior to litigation.

EPA enforcement attorneys who support enforcement ADR reported preferring the flexibility in crafting a resolution to an enforcement problem that ADR gives them, as opposed to the constraints of litigation. Further, they reported feeling more in control of their case than if they were before a judge. One attorney interviewed, for example, remarked that "throwing a case before a judge" represented the ultimate loss of control,

whereas mediation increases the amount of control attorneys and parties have, since resolution only occurs through consensus. Finally, some said they choose ADR because it forces the parties to be civil, as opposed to adversarial.

Conflicting views of EPA's incentives to mediate can be found in the PRP response to the question of EPA "helpfulness" in establishing an ADR process. A little under one-half of the PRPs found EPA moderately or very helpful; however, the other half found the agency very unhelpful. As one respondent put it, "the agency had to be dragged kicking and screaming" to ADR. The fact that our sample consisted of mediated cases is likely to have biased the responses towards the EPA being "helpful." And in fact, interviews with EPA regional ADR specialists and the third-party neutrals who helped mediate Superfund disputes have also indicated ambivalence, if not overall negativity, within the agency about the role of mediation.

Despite the positive comments by EPA enforcement attorneys cited above, concerns among other EPA attorneys are prevalent. Some lawyers reported, "If I can win, why mediate?" Other attorneys reported that there is a perception that using ADR is a sign of a weak case. Still others reported, contrary to the findings reported above, a fear of loss of control over their case once in the ADR process. Some attorneys also think that asking for a mediator will be a sign that they need help as a lawyer/negotiator. Several mediators, as well as PRPs, mentioned that EPA and Department of Justice attorneys were forced into mediation by a judge. Much of this stems, undoubtedly, from traditional law school education where attorneys are taught that to represent their clients zealously they must act in an adversarial fashion. Similarly, one author writing on ADR training sessions notes that EPA staff attorneys regularly question why they should mediate when the agency has "sweeping, unilateral powers of enforcement"(Peterson 1992, 332). It would seem that despite efforts to promote ADR within the agency, as well as the satisfaction with the program of most EPA enforcement attorneys who were interviewed, there are countervailing pressures that undermine the use of ADR. Again, a possible explanation may be the premier power status that the agency and agency attorneys have under environmental law, particularly the Superfund law.

Another explanation for EPA attorneys' reluctance to mediate may be rooted in past negative publicity about letting polluters off the hook (Anderson, 1985). This would certainly reinforce apprehension about ceding the power to demand a specific outcome. Another way of looking at the issue is that EPA and the PRPs have not reached the "hurting stalemate" that Kriesberg hypothesizes is a precursor to successful conflict resolution (Kriesberg, 1999). The power is too heavily on the side of the EPA to want to cede any advantage through mediation. Interestingly, while power theory would also hold that the weaker party should not negotiate because mediation simply reinforces the power imbalance, here PRPs seem very willing to come to the table.

What Are the Key Elements Needed for the Successful Resolution of Environmental Conflicts?

The literature concerning the key elements needed for the successful resolution of environmental conflicts is broad and diffuse. For example, it is maintained by O'Connor

(1978) who surveyed the opinions of mediators that certain ingredients contribute to successful environmental mediation (such as the desire to resolve differences, commitment, a neutral third party, understanding of technical issues, compromises, and written agreements). Based on three mediated negotiations at EPA, OSHA, and the Federal Aeronautics Administration (FAA), Susskind (1985) concludes that there are five common ingredients to successful mediated negotiations (including environmental regulatory negotiation): "(1) participation by representatives of key stakeholding interests (both able and willing to commit their membership); (2) joint fact-finding; (3) face-to-face negotiation, typically aided by a nonpartisan mediator or facilitator; (4) a focus on inventing the best possible ways of dealing with differences…; and (5) the preparation of a written agreement that all participants agree to help implement."

Schneider and Tohn (1985) concluded from examining two EPA negotiated rulemakings that written agreements are important to reaching consensus. After examining 81 failed environmental mediations, Buckle and Thomas-Buckle (1986) concluded that while mediators of failed environmental negotiations generally felt that the lack of a written agreement was a sign of failure, participants and observers reported an appreciation of the process and the education derived from the process.

Most authors agree with the conclusion that key parties to an environmental controversy must participate in mediations for them to be successful. Nash & Susskind (1987) make this observation based on case studies of municipal solid waste incineration. Susskind, McMahon, and Rolley (1987) concur. A similar conclusion is made by Gusman (1983), who wrote that interested parties must be involved in the negotiator selection process to the maximum extent that is practical.

Wondolleck, Manring, and Crowfoot (1996) take these views many steps further in their conclusions based on an examination of six case studies and extensive interviews with citizen group participants in ADR processes. The most successful efforts, they found, are those in which citizens have some of the requisite skills—political savvy, negotiation, and communication skills—as well as the energy and resources to devote to the process.

Moore (1996) shifts the locus of the debate from how mediators define success in dispute resolution to how *participants* define such success. Basing her conclusions on two case studies of public land planning disputes in the U.S. and in Australia, Moore describes both conditional and unconditional success. She then explains five dispute resolution success categories evidenced in her research: product-oriented, politically oriented, interest-oriented, responsibility-oriented, and relationship-oriented. A final conclusion of Moore's research is that we need to broaden our definition of successful mediations and negotiations beyond whether a written agreement was finalized or not.

In our research, three key factors stand out as being key to the successful resolution of an environmental enforcement conflict through ADR: control, having key stakeholders at the table, and communication. The issue of control is one that is not well defined in the literature. One of the guiding ideas of ADR is that the participants should have control

over designing the process. Some proscribe specific processes of mediation (Folberg, 1988) while others extend this idea of control to direct control over the processes of decision making (Carpenter and Kennedy, 1985).

In the EPA enforcement attorney's responses to questions about their views of the mediation processes, there is a very close association between the attorney's sense of "loss of control" over the process and the outcomes and the failure of the mediation to reach an agreement. The concern over control, while strong for PRPs as well, is not as strong as that of the EPA attorneys. The mean enforcement attorney response to the question of "control over the process" for those cases that failed as opposed to those which were successful was 1.97 and 2.88 respectively. (On our Likert scale, 1 is "very satisfied" while 5 is "very dissatisfied.") Similarly, the averages for "control over outcome" were 1.91 and 2.59. Contrasted to this, several attorneys made unprompted comments about giving up control being necessary to reach a resolution. Control was an issue for the PRPs, though not as strong. It was significant only as it related to control over the outcome.

In general, both enforcement attorneys and PRPs reported satisfaction with the other elements of the enforcement ADR process, regardless of the outcome. Average scores on the Likert scale were all in the "very satisfied" or "satisfied" range: for "amount of information received" the scores were 1.66 for attorneys and 2.05 for PRPs; for "opportunity to present your side" the scores were 1.43 for attorneys and 1.23 for PRPs; for ability to "amount of participation" the scores were 1.37 for attorneys and 1.39 for PRPs; and for "fairness of the ADR process" the scores were 1.48 for attorneys and 1.23 for PRPs.

From the perspective of the third-party neutrals, having the key stakeholders with decision-making authority at the table was a key element needed for the successful resolution of the conflict. While expressing strong support for EPA enforcement ADR processes generally, a majority of the third-party neutrals expressed frustration in three key areas concerning who was at the table: a frustration with their inability to get the EPA itself to the table; if EPA was represented at the table, a frustration with the fact that the representative usually had no authority to commit; and a frustration with their inability to get key Department of Justice decision-makers to the table, or to obtain access to them generally. When key stakeholders were not at the table, mediators reported that the conflict generally was not resolved.

There is one last element of the process that was closely associated with the ability to reach a successful outcome and that was the issue of communication and the related issue of feeling that the other party in a dispute learned about or understood your interests. While not heavily emphasized in the environment-related alternative dispute resolution literature, the general literature on ADR and mediation heavily emphasizes communication. Fisher and Ury emphasize the importance of a "discussion stage" of negotiation where "differences in perception, feelings of frustration and anger and difficulties in communication can be acknowledged and addressed"(Fisher and Ury, 1991: 14). Similarly, Katz and Lawyer emphasize the importance of communication in resolving

conflicts (Katz and Lawyer, 1983). Carpenter and Kennedy identify “establishing regular and predictable communication” as a key element in their conflict resolution design (Carpenter and Kennedy, 1985).

Improved communication seems to be a particular concern for the PRPs. It is interesting to note that several of the PRPs specifically mention communication problems as a reason for entering mediation. When asked whether “others learned” there was a significant difference in the mean responses for those cases that reached resolution (1.67) and those that failed (2.71). Interestingly, there is also a significant difference in the answer to the question whether “I learned” from the mediation process, with an average of 1.78 for cases successfully resolved and 3.29 for those that failed. While these measures were not significant for the EPA attorneys, the “opportunity to present your side of the dispute” was significantly different for those cases that succeeded compared to those that failed.

Similarly, when asked about the “opportunity to discuss multifaceted issues that are often not addressed in litigation,” those PRPs who participated in cases where the conflict was resolved reported an average score of 1.67, while those in unresolved cases reported a score of 2.60. Here the EPA attorneys also showed the importance of discussion, reporting mean differences of 1.82 and 2.53 for resolved versus unresolved mediation cases.

What are the Important Mediator Characteristics Needed for the Successful Resolution of Environmental Conflicts?

In a list of components against which mediators should be evaluated, one author notes that the mediator should be prepared, empathic, problem-solving, have persuasion and presentation skills, be able to minimize distractions, manage the interaction and have a substantive knowledge of the subject area (Honeyman 1990). These areas seem to be reflected to varying degrees throughout the literature. There is a modicum of dissent concerning how knowledgeable about the subject matter of a case the mediator needs to be. In a case study of the Alaska Forest Practices Review Act, for example, the authors found that technical expertise was less necessary than expected, yet even they noted that negotiators whose sole expertise was process should be teamed with ones with more substantive knowledge (Gaffney 1991). Most argue that substantive knowledge is critical in helping parties collect and review relevant information (Louis, 1999; Abbot, 1990). In some circumstances, a mediator needs to act in a purely facilitative role. However, most argue that this may be counterproductive in environmental disputes (Susskind, 1987).

As conventional wisdom suggests, the role of the mediator is important but not decisive. In our study, although there was general satisfaction with the mediators, respondents cited an inconsistency in the quality of mediators in the areas of knowledge about the subject area and ability to control strong-willed attorneys. As such, it indicates that conclusions about a firm grasp of the subject matter and a strong role for the mediator may be warranted. Otherwise, there were no significant differences in the scores of the questions that evaluated the performance of the mediators relative to the success or

failure of the dispute. Additionally, the scores were equally high from PRPs as from EPA attorneys. Mediator performance overall received a 1.46 from the PRPs and a 1.57 from EPA attorneys. Not surprisingly, the mediators reported overall that they were either very satisfied or satisfied with their own performance in each of the cases we reviewed.

The EPA contracts out most of its environmental dispute resolution mediator assignments to non-profit or private companies that specialize in environmental mediation, and it is likely that the high ratings for the mediators are a reflection of their professionalism. The lack of difference in scores between resolved and unresolved cases suggests that there are elements beyond the control of mediators that ultimately determine the outcome of the case, as discussed in the previous section.

Does the Number of Parties at the Table Affect the Outcome of a Mediation?

Some have argued that efforts to resolve environmental disputes can only have a limited number of disputants participate if they are to be successful (Carpenter and Kennedy, 1985; Susskind, 1987). Gail Bingham, however, in her landmark study of environmental dispute resolution, found no correlation between the number of disputants and the successful outcome of a negotiation. In fact, she found that there were slightly more disputants in cases that were successfully resolved (Bingham, 1986). Our findings from the study support Bingham. The number of disputants ranges from 2 to 1200 and appears to be evenly distributed across successful and unsuccessful resolution of disputes.

Conclusions

The findings of our study support much of the conventional wisdom of those who work in mediation as well as the theory found in the literature. Why do parties to a dispute choose ADR? The common themes found throughout this research are to save money, to save time, to have greater control over the outcome, to educate, to communicate with the other parties to the dispute, to “get a better deal,” and to preserve flexibility in crafting an agreement. What are the key elements necessary to the successful resolution of environmental conflicts? Undoubtedly there are many, but the three that were most often mentioned in our survey were giving parties control over the process, getting key stakeholders to the table, and communication among the parties. What are the characteristics that are important for mediators to have? They should exhibit basic competence, knowledge of the subject matter, and assertiveness with difficult stakeholders. Finally, does the number of parties to a dispute affect the outcome of ADR efforts? Absolutely not.

Some of the more interesting results of this research relate to the role of the powerful and their willingness to mediate. Opponents of mediation have suggested that mediation locks in power differences to the detriment of the less powerful (Amy, 1987; Nader 1995). While far from conclusive, the results here actually suggest the opposite. Some of those who are powerful in a legal sense, in this case the EPA, are actually reluctant to mediate because it entails giving up a level of control. Those who are less powerful, the PRPs, appear to be far more willing to mediate and save themselves the time and

cost of litigation—and through better communication reach a better agreement for themselves.

After nearly two decades of practice, EPA has elevated enforcement ADR from an experiment to a full-fledged program. The results of this study confirm numerous benefits of ADR which have long been purported in theory and espoused by practitioners. However, it also reveals significant concerns among EPA attorneys that will have to be addressed if enforcement ADR is to become a more accepted norm at the agency. EPA recently announced plans to expand ADR throughout the agency.[8] By examining the microcosm of enforcement ADR, we hope that this study will provide EPA with additional insight into the motivations of participants in all types of dispute resolution processes. Other public entities that wish to initiate ADR programs can also gain from these findings. In retrospect, EPA seems to have profited from its iterative approach of beginning with a small pilot program in a single region and assessing the results before expanding to an agency-wide effort. Despite the promising findings of this study, all parties involved in the research, practice, and implementation of ADR programs must bear in mind that this is still a nascent field—one which requires further research on the indicators of ADR success and failure.

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SESSION III

WEDNESDAY, MAY 17, 2000
3:30-5:00 P.M.

Stuck in the Muck

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

Monica Medina, Heller, Ehrman, White, and McAuliffe, Washington, D.C.

Panelists

David Lohman, Port of Portland, OR

Marcia Newlands, Heller, Ehrman, White, and McAuliffe, Seattle, WA

Craig O'Connor, Esq., National Oceanic and Atmospheric Administration (NOAA)

Panel Abstract

As the Superfund program reaches maturity, the government will be turning its attention to natural resource damages issues at many sites. Some of the most difficult sites that remain are those involving contaminated sediments in ports and harbors. These sites are particularly complex because they involve many potentially responsible parties, many stakeholders, and great technical uncertainty regarding how to remove and dispose of the contaminated sediments in the least damaging way. This panel will examine one such site, the Portland Harbor site, and determine whether and how to use ADR to resolve many complex issues such as trustee roles and relationships—whether the federal, state, and tribal interests are the same or different since they are trustees for the same resources; the interrelation of various state and federal authorities, such as the Oil Pollution Act, Clean Water Act, CERCLA, and the Endangered Species Act, and their state law counterparts; the integration of the damage assessment phase into the remediation planning phase as opposed to delaying attention to natural resource damages issues; and the impact of politics on progress towards cleanup and restoration of natural resources. A panel of stakeholders representing responsible parties, the government, and the tribes is expected to participate.

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The Boundary Waters Mediation

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

John A. Wagner, Federal Mediation & Conciliation Service, Office of ADR/ International Affairs, Washington, DC

Panelists

Scot Beckenbaugh, FMCS, Upper Midwestern Region, Minneapolis, MN

Elizabeth Schmiesing, Attorney, Faegre & Benson, LLP

George Sundstrom, Sheet Metal Workers' Local 10, MN

Panel Abstract

Boundary Waters Canoe Area Wilderness (BWCAW) and Voyageurs National Park (VNP) occupy over 1,500,000 acres in the beautiful, pristine area of northeastern Minnesota and contain numerous lakes, hiking trails, campsites, and portages (areas to transport boats between lakes). For decades, there was heated public debate between interests who wanted these areas to be a pristine wilderness and groups of landowners, businesses, and other multiple-use advocates who wanted greater access, more areas for motor boating, and more local control. In 1996, opposing bills in Congress brought the controversy to a boil. Against this backdrop, U.S. Senator Paul Wellstone requested that the Federal Mediation and Conciliation Service (FMCS) facilitate a multi-party dispute resolution process that could identify the various interests and bring representatives together to develop consensus recommendations to finally resolve the longstanding conflict. The BWCAW negotiation is the focus of this panel.

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Mediating in the Shadow of the Legislature

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

Margaret Weil, Oregon Department of Transportation, Salem, OR

Panelists

Sam Imparati, Institute for Conflict Management, Inc.

Craig Greenleaf, Oregon Department of Transportation, Salem, OR

Panel Abstract

This program will explore the dynamics of politics, policy, and change involved in a one-year rulemaking project with the Oregon Department of Transportation (ODOT) and sixteen diverse interest groups from around the state. The factual context for this program involves the development of access management administrative rules for the Oregon highway system. The discussion will highlight the critical process steps: the decision to collaborate, selecting the neutral, convening the group, educating the committee, managing agency staff concerns, the negotiation process, critical decisions, rule adoption, rule implementation, and follow-up protocol. What worked, what to design around, the use of commercial-sector mediation techniques in a public forum, and managing multiple dynamics with scarce resources are some of the topics that will be covered. Learn what the process sponsors would do differently next time! Those in attendance will receive practical handouts, engage in a dialogue with the panelists, and view a brief video of the process participants sharing their experiences.

Individual Papers

Oregon's New Access Management Rules:
A Study in Process, Politics, and Pragmatism
By Craig Greenleaf, Del Huntington, Sam Imperati, and Margaret Weil

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Oregon's New Access Management Rules: A Study in Process, Politics, and Pragmatism

By Craig Greenleaf, Del Huntington, Sam Imperati, and Margaret Weil

Executive Summary

The Oregon Department of Transportation (ODOT) charged the Access Management Advisory Committee (AMAC) with the task of addressing issues related to implementation of the access management[1] portions of the 1999 Oregon Highway Plan (OHP). AMAC commenced its work on February 19, 1999, and held 18 meetings between that date and December 14, 1999. The AMAC process included facilitated assessment of complex, interrelated transportation planning issues, development of draft rule language, and recommendations for changes to the OHP. Committee members communicated with their respective stakeholder groups, and ODOT staff worked tirelessly to produce a comprehensive set of administrative rules. AMAC submitted its draft rules to ODOT in June of 1999, followed the subsequent public hearing process through October, reviewed ODOT's subsequent edits, and considered the hearing officer's report of public comments during its December 1999 meeting. The final written public comment period concluded January 7, 2000 and the Oregon Transportation Commission (OTC) adopted the rules without amendment on February 9, 2000. The new Chapter 734 Division 51 Access Management Administrative Rules were filed with the Secretary of State on February 14, 2000 with an effective date of April 1, 2000.[2]

ODOT contracted with Sam Imperati of the Institute for Conflict Management, Inc. (ICM) to facilitate the work of AMAC. Alison Kelley participated on the ICM team as an independent consultant. In addition to managing the AMAC process, ICM assisted ODOT with the post-AMAC, pre-adoption public hearings process and with the initial implementation phase of the new rules. ICM worked with trainers from ODOT's Access Management Group to develop operational procedures implementing key rule provisions. Finally, it assisted ODOT staff in preparing training materials covering the perspectives of stakeholders, new rule content, and corresponding new procedures to help field personnel make a smooth transition to the new rules.

Upon adoption of the Division 51 Access Management Rules, the OTC approved a fifteen-month review to assess the effects of key rule provisions. ODOT has launched a new electronic permitting program (Central Highway Approach/Maintenance Permitting System—CHAMPS)[3] that will collect data pertinent to this review.[4] ODOT looks forward to continued feedback from interested stakeholders[5] regarding Division 51 Rules, and anticipates that the collaborative attitudes developed during the AMAC process will provide an important framework for continued productive communication regarding access management and other issues involving ODOT's stakeholders.[6]

Background

Access management generally involves "balancing access to developed land while ensuring movement of traffic in a safe and efficient manner."[7] The OHP policy goal is "[t]o employ access management strategies to ensure safe and efficient highways consistent with their determined function, ensure the statewide movement of goods and services, enhance community livability and support planned development patterns, while recognizing the needs of motor vehicles, transit, pedestrians, and bicyclists."[8] Oregon Revised Statutes Chapter 374 governs management of access to Oregon state highways. Prior to adoption of Division 51 rules, Oregon Administrative Rules Chapter 734 Division 50 contained administrative guidelines to implement provisions of the statutes through a permit system.[9]

Before convening AMAC, ODOT officials and the OTC recognized the need for improvement in Oregon's access management system. While reflecting regional and transportation system diversity, a wide range of operational permitting practices across the state led to inconsistency in permit decisions and resulted in frustration for property owners and developers. Regarding the effect of road approach denials for developing property, commercial stakeholders voiced concern over the practical ability of narrow "alternate access" routes to serve development adequately. Understanding that inverse condemnation laws did not guarantee property owners compensation[10] and that denial of access under certain circumstances would not necessarily trigger compensation for the property owner, many stakeholders grew increasingly frustrated with policies they felt were out of sync with legitimate development needs and transportation planning objectives. Additionally, many ODOT officials and stakeholders expressed the desire for an improved appeals process.

To address these issues, ODOT acknowledged the need to consult with stakeholders in order to understand their perspectives and solicit their input in developing appropriate administrative rules. When to convene the committee[11] became a central question; a new legislative session was approaching[12] and a major case was pending before the Oregon Court of Appeals.[13] ODOT determined it was in the best interest of the state and its citizens to proceed immediately, and ultimately charged the committee with the task of developing recommendations regarding implementation of the OHP policies relating to medians, spacing, deviations and permitting, with the understanding that such recommendations would likely address issues surrounding reasonable access and grants of access.[14]

Pre-AMAC Planning

During the summer of 1998, ODOT staff held a series of work sessions to develop common objectives related to the agency's approach to access management. Simultaneously, work was progressing on the 1999 OHP. By the fall of that year, the internal work had produced decision points to guide managers in their efforts to improve the agency's approach to access management.[15] That November, ICM met with ODOT to discuss the process plan for the anticipated advisory committee. Throughout December

of 1998 and January of 1999, ICM held additional meetings with ODOT, reviewed extensive background materials, and refined the process plan while ODOT began identifying interested stakeholders.[16]

Developing the Agreement to Collaborate[17] constituted a central component of the early planning stages. Articulating the legal authority,[18] the core charge, the operating procedures, and the ground rules, the Agreement to Collaborate[19] became a tool that would provide a clear focus for the committee. ODOT and ICM devoted hours of review and editing to achieve a balanced Agreement before it was presented to AMAC. The Agreement included the schedule of AMAC meetings as well as the subsequent rule adoption schedule. Although the Agreement contained a clear "core charge," some AMAC members expressed concern that the charge would preclude their consideration of collateral but interrelated issues.[20] Negotiation surrounding that question constituted the first major challenge for the committee. The resulting agreement was instrumental in launching a collaborative process in which all participants realized their concerns would be heard.[21]

Organization and "mid-course" corrections continued throughout the AMAC process through frequent communication among ICM, Craig Greenleaf (ODOT's Deputy Director of Transportation Development and a nonvoting member of AMAC),[22] and Margaret Weil (then-Public Policy Coordinator for Community Development Cluster and the contract administrator). Communication with other ODOT personnel and with AMAC members was arranged as necessary to address the legal, policy, and technical issues that AMAC was considering.

Organizing basic meeting logistics comprised an important part of the AMAC process. ICM and ODOT agreed to the need for precise, complete meeting minutes because the topic was of statewide importance. AMAC meeting summaries were posted on ODOT's web site[23] following each meeting, generally from a court reporter's transcript. Although time consuming, the detailed quality of minutes provided a valuable record for resolution of future questions and allowed a broad audience to track AMAC's progress. Additionally, because many AMAC meetings lasted nine hours or more and required several committee members to travel from outside the region, efforts were made to provide adequate supplies and suitable refreshments throughout each meeting. These small details assisted committee members in focusing on their immediate tasks. Between meetings, the use of e-mail and the web site provided a timely communication system.

AMAC Education

Participants on advisory committees typically bring differing levels of policy, technical, and legal expertise to their work and AMAC was no exception. In the beginning, all members of AMAC faced the task of becoming acquainted with complex areas of policy, engineering and law in order to participate constructively in the process. ODOT provided extensive background material that ICM assembled into notebooks and encouraged AMAC members to read. Throughout the process Assistant Attorney General Dale Hormann explained the history of access management in Oregon and assisted AMAC

members in understanding key aspects of relevant laws. The members also educated each other on economic, technical and operational issues.

Because the collaborative process would involve intensive negotiation, ICM devoted much of the first AMAC meeting to educating participants in useful communication strategies and pertinent conflict resolution concepts. ICM helped members to understand the objective of finding "common ground" and to utilize dispute resolution tools for overcoming conceptual gridlock. ICM utilized mediation techniques used in commercial disputes[24] as well as public policy strategies to manage potential impasses. As the AMAC process continued, ICM reinforced productive communication strategies and brainstormed innovative techniques to minimize unnecessary conflict and maximize the creative potential of the group.

The AMAC process involved multilevel education flowing in several directions simultaneously. Participants clarified their concerns and learned to appreciate the perspectives of their colleagues, while at the same time developing recommendations that would improve Oregon's access management system. The process also succeeded in demonstrating that complex transportation issues could be resolved more effectively in the collaborative arena that either the political or legal arenas.

Negotiation/Resolution

The eighteen AMAC meetings were all-day sessions (with three exceptions) held either in Portland or Salem. The committee agreed to working lunches during the last several meetings in order to utilize available time most productively. To explore difficult issues that were too complex or contentious for immediate decisions, ICM proposed that balanced subcommittees study the subject matter and develop draft recommendations to submit to the entire group. AMAC members volunteered to participate in subcommittee work depending on the degree to which the question matched their interest or expertise.[25] Following subcommittee meetings, the next full AMAC meeting typically involved subcommittee members summarizing their work and presenting their recommendations to the other AMAC members. Subcommittee members typically developed a depth of knowledge about a particular area through their work together, and then set the context for the large group so all members could deliberate with the same level of information.

As described in the Agreement to Collaborate, ICM used a single-text, discussion draft process to facilitate the development of recommendations and draft rule language. Early in the process, ICM converted ODOT's draft rule concepts into a single document to which AMAC members could respond with proposed changes. Throughout the remaining months, ICM corresponded with AMAC members through electronic mail, sending "red-lined" drafts to the committee and to ODOT following meetings, collecting further edits and feedback, and incorporating suggestions into the single-text discussion draft in preparation for the next AMAC meeting. ICM used a consensus voting procedure[26] that allowed AMAC members to register their responses to proposals and included an opportunity to offer suggested edits to textual development while explaining their reasoning. The consensus voting procedure included the possibility for a minority report in the event the committee did not reach consensus on a particular point.

From a process perspective, the complex nature of the subject matter produced a tendency for members to include collateral issues in their explanation of reasoning behind a vote. This dynamic highlighted the need to balance consideration of interrelated concerns with the need for a focused discussion. To manage this balance, ICM used classic facilitation tools to assist members in focusing on the point at issue while recording collateral concerns on flip charts for later consideration. The team approach to facilitation became invaluable during these sessions as one facilitator managed the discussion while the other kept track of rapidly developing concepts and proposed changes using a laptop and an InFocus projection system.

In addition to the negotiation within AMAC, a large portion of the work involved consistent communication among ODOT staff regarding emerging AMAC proposals. An internal group of advisors[27] met weekly with Mr. Greenleaf to explore the latest developments and to offer their feedback. ICM participated in many of these meetings as one strategy for process continuity. Although necessary to ensure the rules were workable from ODOT's perspective, this second set of weekly meetings placed additional strain on agency resources already consumed by the demands of ongoing work and the legislative session.[28] This should be a consideration for other agencies faced with the decision of whether to conduct a large-scale collaborative process during a legislative session. This issue also affects private sector stakeholders.[29]

Legal and Technical Overview of the New Access Management Rules

The administrative rules developed in this collaborative process reflect a comprehensive approach to access management. From a substantive perspective, the new rules:

a. Encourage early communication between the agency and the applicant to clarify expectations;
b. Provide consistency through the use of objective criteria for approving approaches;
c. Clearly define and assign specific responsibilities within ODOT;
d. Establish a 120 calendar-day time frame for approval or denial of an application;
e. Publish access management spacing standards and minor deviation limits;
f. Establish access management objectives for highway projects;
g. Establish an expedited appeals process and opportunities for collaborative discussions; and
h. Encourage the use of access management plans and intergovernmental agreements in long-term comprehensive planning so projects are coordinated with local land-use processes.

Prior to AMAC, ODOT determined whether to grant an approach road permit largely by assessing whether there was reasonable alternate access. This allowed ODOT to maintain mobility and safety on state highways by limiting the number of direct approaches, which studies had shown introduced conflict points leading to congestion and crashes. As the Oregon Court of Appeals had noted, "A landowner's access to a high-

way that abuts the landowner's property is subject to the state's authority to control and regulate the use of the highway."[30] Denial of an approach permit has not been held by Oregon Courts to entitle property owners to compensation as long as the owners had some other reasonable access, under the theory that any reduction in business or value of the property pursuant to such denial did not deny all economically beneficial or productive use of the land so as to amount to a "taking."[31] Similarly, property owners are not entitled to compensation for denial of an approach permit when such denial resulted in inconvenience from traveling a more circuitous route.[32] Compounding this dynamic was an appeal process that precluded contested case hearings for certain types of actions.[33]

First at the subcommittee level and eventually in full committee, AMAC assessed the above issues and considered the feasibility of developing criteria for ODOT to use in assessing an application for an approach. Objectives included providing permitting guidelines that would be applied consistently throughout the state, thus assisting stakeholders in anticipating how permitting decisions would be made. New OAR 734-051-0080, *Criteria for Approving an Application for an Approach*, contains permitting criteria that distinguish public and private approaches, subject property that has reasonable access and that does not have reasonable access,[34] and rural and urban areas. Carefully crafted through months of intensive discussion and with internal feedback from AMAG, the *private* approach permitting criteria include two factors for *urban or rural* private properties *without reasonable access,*[35] nine factors for *urban* private properties *with* reasonable access,[36] and nine factors for *rural* private properties *with* reasonable access that is not or cannot be made adequate.[37] AMAC concluded this approach was preferable to an attempt to redefine "reasonable access" in the administrative rule arena because it did not have the power to affect judicial or legislative pronouncements even if the latter option was politically viable.

Pursuant to SB 773, ODOT established rules providing for a 120 calendar-day limitation on approach permitting decisions, including internal appeals (OAR 734-051-0070). Finally, appeals processes were implemented that included both informal collaborative discussions (OAR 734-051-0390)[38] and formal contested case procedures (OAR 734-051-0400). Taken together, the new rules provide an innovative approach to access management in Oregon.

Rule Implementation

ODOT initiated an in-depth training process to ensure staff would be ready to use Division 51 Rules prior to their effective date of April 1, 2000. ICM assisted ODOT staff in developing training objectives, materials, and strategies. Training objectives included: learning to identify key timelines, applying permitting criteria, understanding the appeal process, determining specific individual responsibilities within regions, and understanding the relationship between Division 51 Rules and the 1999 Oregon Highway Plan. Training also included discussion of the interrelationship between the new database and permitting program (CHAMPS) and the permitting process.

To achieve these objectives, staff developed a training module that provided an overview of the rules and delivered detailed analysis of specific rule provisions. Combining audio-visual presentations with focused group discussions, staff facilitated a two-day session in each of the five ODOT regions. ICM facilitated debriefing sessions following each of these trainings to assess the prior session and prepare for the next. Staff then arranged for a third training day during which specific case examples were explored in detail, previous questions were answered, and careful attention was given to reviewing procedures. ICM and ODOT addressed written questions regarding both substantive and process issues from the first two days of the training in a question-and-answer handout.[39]

Evaluations collected from each of the regions revealed a strong overall satisfaction rate. Comments consistently reflected the desire to meet the needs of applicants while at the same time providing for the safety of the traveling public. Participants requested ongoing follow-up training, offered constructive suggestions regarding implementation procedures, and demonstrated general optimism toward using the new rules. In addition to follow-up staff training, ODOT is considering public informational sessions on the new rules.[40] At this time, a new brochure detailing the permitting process[41] and copies of an approach application[42] have been made available on ODOT's web site.

Conclusion

AMAC fulfilled its task of addressing implementation of the access management portions of the 1999 OHP. Although the juxtaposition of the AMAC process with the 1999 Legislative Session created some logistical difficulties and political pressures surrounding this highly contentious subject, AMAC produced recommended administrative rules that have been widely viewed as representing a balanced approach to access management. Following the conclusion of the process, several AMAC members noted they did not achieve their "wish list" of access management policy changes, yet in the same breath these members expressed satisfaction with the process and generally with the result. The combination of AMAC's tireless efforts and the hard work of ODOT created a synergy that ultimately produced not only new rules, but also enhanced understanding between previously polarized groups.[43] ODOT's efforts to collaborate internally while AMAC was completing its tasks increased the likelihood of agency staff acceptance of the new rules.

This process exemplifies the benefits of carefully managed collaborative processes. The result is a credit to AMAC's sponsors and participants, who had the courage to negotiate collaboratively on a range of technically complex and politically sensitive issues. The OTC's and ODOT's openness to input bolstered their credibility and effectiveness. Like the OTC and ODOT, the facilitators anticipate that the collaborative attitudes developed during the AMAC process will provide an important framework for continued productive communication regarding access management and other issues involving Oregon's transportation stakeholders.

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ENDNOTES

[1] The Oregon Court of Appeals has defined "access" in the following manner: "'Access' has been construed narrowly as referring to the common law right of access to a 'conventional road or highway' from land that *abuts* the highway . . . In earlier cases, the common law right of access has been called an 'easement of access.' In rural areas an easement of access implies a reasonable right of ingress and egress from and to the highway from the property, and not at all points along the highway.'" Witten v. Murphy, 71 Or. App. 511, 515-16, 691 P.2d 715, 719 (1984)(citations omitted) (cited in Timothy V. Ramis and Andrew H. Stamp, *Integrating Procedural Aspects of Transportation and Growth Management in Oregon: A Critical Look at the Oregon Department of Transportation's Role as a Growth Management Agency,* 77 OR. L. REV. 845, 846, n. 3 (1998). "In addition to the regulation of driveways and approach roads, the term 'access management' encompasses the planning and permitting of medians, turn lanes, proper spacing of traffic signals, freeway interchange design, and other measures designed to improve the safety and efficiency of the highway system." Ramis and Stamp at 846, n. 3.

[2] The new rules clarify the management of access on state highway facilities. They consolidate and organize procedures for addressing access management issues into a single set of indexed rules. For the public, these efforts increase the level of predictability in obtaining an approach to a state highway. For ODOT, the new rules increase the level of consistency within the permitting process.

[3] This electronic permitting system will provide statistics regarding the number of applications received, number of approaches approved or denied, and the complexity of the approach requests. CHAMPS also is able to distinguish approaches by highway, district or county. The way in which the approach applications are entered into CHAMPS allows ODOT to evaluate and monitor the timeline in which approaches are processed. This is important with respect to the 120 calendar-day limitation on the approval or denial of an approach request. ODOT is keeping a log of issues identifying potential "problem areas" and "fixes" that may be necessary to the rules as implementation proceeds. ODOT intends to analyze how effectively 734-051-0080 (Criteria for Approving an Application for an Approach) is being applied. How grants of access are handled will be reviewed as well. Finally, ODOT will monitor the number of appeals and their outcomes.

[4] In addition to the types of analyses listed above, it may be possible, if the mapping of highway segment designations is available prior to July 2001, to overlay such a map with the locations where permits were issued over the previous year. This will provide information regarding permitting patterns in Urban Business Areas (UBAs) and Special Transportation Areas (STAs). It also will show what kinds of permitting activity is occurring along designated Expressways.

[5] The 15-month review and feedback from stakeholders will assist the OTC in responding to a concern that was raised by some AMAC stakeholders. The concern, as expressed by two Commissioners at the February 2000 OTC meeting during which the rules were adopted by a 4-1 vote, deals with coordinated use of the rules and the 1999 OHP, and whether more specific language is needed to ensure access management decisions are interpreted in line with OHP policies. ODOT will provide feedback on the degree to which access management decisions are supporting the policies in the OHP.

[6] AMAC participants commented favorably upon the collaborative process at its conclusion, and it is anticipated that stakeholders will take advantage of improved communication with ODOT as they offer feedback regarding Division 51 Rules during the fifteen-month review period. Information regarding the comments of AMAC participants were recorded by the Policy Consensus Initiative (PCI)<http://www.agree.org>. Contact PCI Co-Executive Director Chris Carlson of Santa Fe, New Mexico (505-984-8211.

[7] 1999 Oregon Highway Plan at 101.

[8] 1999 OHP at 101.

[9] For background regarding access management in Oregon, visit <http://www.odot.state.or.us/tdb/planning/access_mgt/> This web site offers research papers that explain the analysis behind relevant policy

provisions and includes a draft policy paper. As noted in the policy paper, "Oregonians benefit from access management because it:

1. Makes roadways safer. Lives are saved and accidents that cause injury or property damage are reduced. Access management projects in other states have reduced accident rates by as much as one-third.
2. Reduces the need for major road widening to meet increasing demands by prolonging the usefulness of existing roadways.
3. Maintains the statewide movement of goods and services necessary for economic prosperity.
4. Produces a more constant travel flow, which helps to limit congestion, reduce fuel consumption and improve air quality.
5. Provides increased safety and options for pedestrians and cyclists, and improved travel time for transit.
6. Encourages the coordination of land-use and transportation decisions which can:
a. Stabilize land use patterns and help preserve private investments; and
b. Support and maintain livable communities.
7. Establishes uniform standards and ensures fair and equal application for neighboring property owners."

Draft Management Policy pp. 3-4. Oregon is unusual in that transportation issues (Goal 12), along with 18 other elements, are combined into one comprehensive planning approach. (*See* <http://www.lcd.state.or.us/backinfo/goals.htm> for a list of the 19 Statewide Planning Goals.) For further background reading, *see generally* Attorney General Advice Letter OP-6457(1993); Timothy V. Ramis and Andrew H. Stamp, *Integrating Procedural Aspects of Transportation and Growth Management in Oregon: A Critical Look at the Oregon Department of Transportation's Role as a Growth Management Agency*, 77 Or. L. Rev. 845 (1998); and Steven R. Schell, *Land Use Meets Populism: Citizen Control of Growth in Oregon*, 77 Or. L. Rev. 893 (1998).

[10] "The mere fact that traffic has to use a more circuitous route to obtain access to Center from Front may be inconvenient, affecting the use, but it does not rise to the constitutional magnitude requiring compensation. A landowner is not entitled to compensation under eminent domain for the circuity of a route resulting from the construction of a limited access highway. Highway Com. v. Central Paving Co., 240 Or 71,74, 399 P2d 1019(1965)" Argo Investment v. Dept. of Transportation, 66 Or. App. 430, 674 P2d 620 (1984).

[11] *See* OAR 137-005-0020(2)(2000) (Assessment for Use of Collaborative DR Process) for guidelines in determining when a collaborative process might be appropriate. Available at <http://www.doj.state.or.us/ADR/adr_mrules_0010.htm>.

[12] During the 1999 session, two significant bills involving access management were passed. SB 773 directed ODOT to adopt rules governing the application for and issuance of permits for approach roads, requiring, in part, that rules adopted by the Department include a 120-calendar day time frame in which to allow or deny a permit, including resolution of internal appeals, and criteria for determining what constitutes reasonable access. SB 86 addressed the ability of property owners to claim relief if ODOT closes an approach road for which a permit was issued or denied an application for an approach road permit submitted pursuant to a grant or reservation of access contained in a deed, and the closure or denial was not the result of conditions contained in a contract, judgement, recorded deed or permit. ODOT has developed proposed administrative rules implementing SB 86, which are currently proceeding through the rulemaking process. (Draft OAR 734-ORI Rule A-6).

[13] ODOT v. Hanson, 162 Or. App. 38, 987 P.2d 538 (1999).

[14] AMAC *Agreement to Collaborate* at 3.

[15] *The ODOT Access Management Decision Package*, December 1998.

[16] ODOT's intention was to invite committee members from various stakeholder interest groups so that the membership of AMAC would reflect balance. The committee represented a wide range of interests, including:

Developers, represented by the International Council of Shopping Centers, the Oregon Association of Realtors, the Retail Task Force and the Oregon Small Business Coalition,

Land Use Groups, represented by Oregonians in Action and 1000 Friends of Oregon,

Transportation Interests, represented by the freight industry, alternative transportation groups, FHWA

and the Alliance for Community Traffic Safety,
State Agencies, including DLCD and OEDD,
Local Government, represented by the League of Oregon Cities and the Association of Oregon Counties, and
Traffic Engineers.

[17]*See* Oregon Administrative Rules 137-005-0030 (2000).

[18]*See* Oregon Administrative Rules 137-001-0007 (1997). This is the rule under which AMAC was conceptualized.

[19]The *Agreement to Collaborate* may be found at <http://www.odot.state.or.us/tdb/planning/access_mgt/amac/ finalagree.doc>.

[20]Discussion of the "core charge" in the *Agreement to Collaborate* occurred during the first few AMAC meetings, and included an effort to allow consideration of collateral yet interrelated issues while maintaining focus upon the central objectives for AMAC articulated by the OTC and ODOT. Ultimately, with the approval of OTC Chair Henry Hewitt, the core charge consisted of four elements: the primary objectives (process for implementation of the access management portions of the 1999 OHP including permitting, spacing, medians and deviations); specific recommendations regarding classifications of state highways and highway segment designations; any recommendations necessary to create consistency between proposed rules and the OHP; and *Other Recommendations* relating to system definition and access management but falling outside the first three categories.

[21]AMAC members sought clarification from ODOT regarding the degree to which ODOT would support AMAC's recommendations. To address this concern, the *Agreement to Collaborate* included the following language: "AMAC recognizes that Oregon Administrative Rule 137-001-0007 does not require ODOT to adopt AMAC recommendations. However, the director understands and acknowledges the time, effort, and resources expended by the AMAC members in this collaborative process. In creating AMAC, the Director acknowledges that the recommendations from AMAC's charge will constitute the **fundamental basis** of ODOT's decisions relating to access management. Therefore, upon their receipt, ODOT, after consultation with the OTC, will take action consistent with its statutory charge in proposing future legislative concepts and policy, proposing administrative rules, and implementing operational changes through design and desk manuals. Finally, the Director will transmit to the OTC for its consideration any AMAC proposals to amend the 1999 Oregon Highway Plan necessary to create consistency with AMAC's adjusted implementation recommendations." (*Emphasis added.)* See *Agreement to Collaborate* at Section II.C and D, pp. 2-3. Upon conclusion of the process, AMAC's desire that ODOT would advance its recommendations unchanged to the OTC became a reality. Largely because of the high quality of communication between ODOT and AMAC during the process, the resulting recommendations constituted a product that carried ODOT's full support and prompted the OTC to adopt the proposed administrative rules without amendment.

[22]Mr. Greenleaf participated on AMAC as a non-voting member and negotiated on ODOT's behalf, conveying invaluable information for the benefit of the committee. Because his position did not include voting authority, AMAC's recommendations retained their status as external advisory committee recommendations to ODOT.

[23]Available at <http://www.odot.state.or.us/tdb/planning/access_mgt/amac/index.html>.

[24]ICM used caucusing techniques to facilitate the resolution of process and substantive issues. Additionally, the participants were coached between meetings on negotiation styles ("You can get further with nice words and a gun than you can just with a gun!" A. Capone), option generation, and managing interpersonal tensions. ICM used these "off-line" conversations for "reality-testing" to help bridge the gap between positions and occasionally put forth "facilitator solutions" for the group to consider when it was struck.

[25]AMAC used such subcommittees to develop recommendations regarding relevant OHP provisions, to analyze the relationship between "reasonable access" and permitting, to develop permitting criteria, and to study draft language involving medians and spacing.

[26]The *Consensus Voting Procedure* is described in Exhibit B of the *Agreement to Collaborate.* During the process, ICM articulated proposed recommendations for consideration. Each voting committee member responded by showing a card displaying the number "1," "2," or "3." "1" indicated full support for the proposal as stated. "2" indicated that the participant generally agreed with the proposal as written, but

preferred to modify it in some manner to give it full support. "3" indicated non-support for the proposal. ICM then invited those members voting "2" or "3" to explain the reasons for their vote and to offer suggested edits. ICM facilitated simple majority voting on suggested edits, and once the edits were complete, took a second consensus vote on the issue. For the purposes of this process, "consensus" was defined as all AMAC members voting "1" or "2." Following the opportunity to consider an issue, ICM recorded a vote as majority/minority if any AMAC members continued to vote "3," and offered those voters the chance to submit a minority report explaining their position. Recognizing the interrelated nature of the issues, ICM called for a final vote at the end of the AMAC process on whether the final recommendations reflected accurately the work of AMAC.

[27]The Access Management Advisory Group, or "AMAG."

[28]In spite of the strain on resources, the value of this internal communication became clear in the subsequent implementation phase because some ODOT employees already had a working knowledge of the new rules.

[29]Conducting a collaborative process during a legislative session creates a negotiation in the shadow of the legislature. All participants have a second forum where they may get a more favorable result or have to defend against a collateral attack. This dynamic set the stage for the use of mediation techniques commonly used in commercial disputes as the parties assessed and reassessed their best alternatives to a negotiated agreement (BATNAs). It also created urgency to in the collaborative effort as the legislative session wound down and the politicians looked to AMAC for answers.

[30]ODOT v. Dupree, 154 Or. App 176, *rev. den.,* (1998), *citing* Curran v. ODOT, 151 Or. App. 781, 784, 981 P.2d 183 (1997). "[P]rivate rights of abutting land owners to access their property via the street or highway are 'subservient' to the primary rights of the public to the free use of the streets for the purpose of travel and incidental purposes.' Oregon Investment Co. v. Schrunk, 242 Or. 63, 69, 408 P.2d 89 (1965). 'To protect the public safety, public convenience and the general welfare, governments may qualify or restrict an abutting landowner's right of ingress and egress via that highway.' *See* State Highway Com. v. Burk, 200 Or 211, 265 P.2d 783 (1954), and Boese v. City of Salem, 40 Or. App. 381, 595 P.2d. 822, *rev. den.,* 287 Or. 507 (1979). . . . After World War II, the legislature adopted comprehensive legislation recognizing the state's police power to control access to public highways. . . Or. Rev. Stat. §374.310(2) allows the state to do anything "in the best interest of the public for the protection of the highway or road and the traveling public. Also, Or. Rev. Stat. 374.305 states that certain actions may be taken, including removal, alteration or change when 'the public safety, public convenience and general welfare' require such action. The quoted language is an implied limitation on the powers that this statute grants to state government. Another limitation, expressed in Or. Rev. Stat. §374.310(3), is that access control statutes may not be 'exercised so as to deny any property adjoining the road or highway reasonable access.' The negative implication of this restriction is that the state may exercise its regulatory powers to deny property adjoining the highway access when there is reasonable alternative access.'" *See* Attorney General Advice Letter OP-6457(1993) at 4.

[31]*See* Dupree, *supra* note 29 at 4, *citing* Gruner v. Lane County, 96 Or. App. 694, 697-98, 773 P.2d 815 (1989); *see also AG Advice Letter* at 4.

[32]Highway Com. v. Central Paving Co., 240 Or. 71, 74-75, 399 P.2d 1019 (1965), *cited in* AG Advice Letter (OP-6457(1993) at 4. "A landowner is not entitled to compensation under eminent domain for the circuity of a route resulting from the construction of a limited access highway." Argo Investment v. Dept. of Transportation, 66 Or. App. 430, 432-33, 674 P.2d 620 (1984).

[33] "ODOT access permitting does not trigger a contested case hearing. . .unless the department is revoking previously granted "reasonable access" or pre-1949 legally established access. . . ." Ramis and Stamp, 77 Or. L. Rev. at 861. *See* n. 70, which observed that when ODOT uses its police power to close access, landowners might have been entitled to appeal the department's decision by requesting a contested case hearing.

[34]Whether a subject property has reasonable access in addition to the requested approach ("reasonable alternate access") constitutes a key issue in determining the effects of denying an approach application. The Oregon Court of Appeals has ruled that the state may restrict access to land, without compensation, so long as the landowner retains "reasonable and adequate access" to serve the land. *See* State Dept. of Transportation v. Shoppert, 82 Or. App. 311, 314, 728 P.2d 80 (1986). The Attorney General's office has noted, ". . .we believe that the courts would find a compensable taking when access restric-

tion leaves a parcel landlocked. A parcel is landlocked when it lacks all access to public ways." AG ADVICE LETTER OP-6457(1993) at 6-7, note 8 (Landlocking a parcel would deny the abutting owner "all economically beneficial or productive use" of the land. Such takings are generally compensable. *See* Lucas v. So. Carolina Coastal Council, 112 S. Ct. 2886 (1992).

[35]OAR 734-051-0080(1) states, "The Department shall approve an Application for an approach for an applicant who applies for a private approach where the subject property has a right of access and the following requirements are met: (a) Where the applicant has no reasonable access to its property, the applicant demonstrates that each of the following requirements are met:
(A) The private approach to the state highway can be accommodated or mitigated consistent with the safety of the traveling public pursuant to the criteria in section (3) of this rule; and
(B) The private approach is consistent with the classification of the highway and the highway segment designation of the state highway facility."

[36]OAR 734-051-0080(1) states, "The Department shall approve an Application for an approach for an applicant who applies for a private approach where the subject property has a right of access and the following requirements are met: º (b) Where the applicant has reasonable access to its property, the private approach to the state highway is in an urban area, and the applicant demonstrates that each of the following requirements are met:
(A) The private approach to the state highway can be accommodated or mitigated consistent with the safety of the traveling public pursuant to the criteria in Section (3) of this rule;
(B) The private approach is consistent with the classification of the highway and the highway segment designation of the state highway facility;
(C) Those requirements set forth in OAR 734-051-0190 and 734-051-0200 are met or a deviation is approved in accordance with the standards set forth in OAR 734-051-0320 through 734-051-0350;
(D) The effect of the approach will meet traffic operations standards, signals or signal systems standards as set forth in OAR 734-020-0400 through 734-020-0500;
(E) The highway mobility standards as set forth in the 1999 Oregon Highway Plan are met;
(F) The site design does not rely upon the highway for internal site circulation, as shown in a site plan set forth in OAR 734-051-0170;
(G) The approach to the highway is consistent with an access management plan, as set forth in OAR 734-051-0360(8), for the segment of highway abutting the property, if applicable;
(H) The approach to the highway is adequate to serve the volume and type of traffic reasonably anticipated to the site, as set forth in OAR 734-051-0130; and
(I) Where additional approaches are requested, more than one approach is necessary to accommodate and service traffic as may be reasonably anticipated to the property."

[37]OAR 734-051-0080(1)(c).

[38]OAR 734-051-0390 states, "... (1) The Region Review process applies to appeals of any action on an application, Construction Permit, or Permit to Operate, Maintain and Use an Approach which is unsatisfactory to the applicant or permittee such as, but not limited to, appeals of denied applications, including denied deviation requests, closure of existing approaches, or appeals of conditions or terms included as part of a Construction Permit. . . .(9) If the Region Review or collaborative discussion does not result in agreement, the Department shall provide written notification to the applicant or permittee within 10 calendar days of the conclusion of the Region Review or collaborative discussion, including information on the applicant's or permittee's rights to request a hearing as provided by the Administrative Procedure Act (ORS Chapter 183). (10) If the applicant or permittee wishes to request a hearing, the applicant or permittee may do so through the procedures, in accordance with the hearings process for contested cases, as set forth in OAR 734-051-0400"

[39]Training will be a continuous process. To facilitate efficient communication, ODOT now has a central email address allowing region staff to communicate directly with Access Management Program Unit members regarding specific questions as they arise. The Access Management Program Unit is developing a distribution system to keep all staff up-to-date with the most current procedural developments. An Access Management Manual will be published soon.

[40]In many cases, this will be initiated by the regions in their direct communication with local governments and stakeholders.

[41]Copies of the new brochure, “Developing Property with an Approach to a State Highway” may be found at <http://www.odot.state.or.us/tdb/planning/access_mgt/adopted_rules/8x11_brochure%20for%20approaches%204-10-00.pdf>.

[42]Copies of the new approach application may be found at <http://www.odot.state.or.us/tdb/planning/access_mgt/>.

[43]ICM presented each AMAC participant and Grace Crunican, ODOT Director, with a T-shirt that read “Accessible, Not Manageable,” in hopes of capturing, tongue-in-cheek, the new-found spirit of these professionals!

Using Games, Simulations, Maps, and Other Tools to Integrate Science, the Humanities, and Community Values to Address Land Use and Environmental Policy Issues in a Collaborative Framework

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

Herman Karl, Center for Science Policy, U.S. Geological Survey, Menlo Park, CA

Panelists

Robert Barrett, Private Practitioner, Menlo Park, CA

Richard Bernknopf, U.S. Geological Survey, Menlo Park, CA

Kevin Hill, Tahoe Regional Planning Agency (TRPA)

Patricia Showalter, San Francisquito CRMP

Panel Abstract

INCLUDE (Integrated Science and Community-based Values in Land Use Decision Making), a component of the USGS Center for Science Policy, is developing methods to integrate scientific, social, and economic information and measures of community values such as ethics and aesthetics into participatory decision making processes that engage stakeholder groups in collaborative research and problem solving. Various transformations of scientific data and GIS are being used to better communicate information to lay persons. Games and simulations are used to highlight for decision makers some of the dynamics of complex land use and environmental policy issues to explore options worthy of further study. The panel will touch on a range of USGS and Stanford projects and activities, particularly emphasizing the use of games and simulations related to such projects as the proposed expansion of the San Francisco airport, development and preservations in the Tahoe Basin, and the potentially disastrous effects that could result around the Pacific Rim from earthquakes and other natural occurrences in heavily populated areas. Most of the discussion will focus on specific, local, collaborative, problem solving efforts developing ways to address flooding issues within the San Francisquito Creek Watershed, which includes five municipalities, two counties, a major university, and areas of great affluence and significant poverty.

Individual Papers

Using Games and Simulations in Integrating Science and Community Values
By Robert C. Barrett

Threshold Monitoring and Evaluation in the Lake Tahoe Basin—A Real Time Approach Linking Science to Decision Making
By Kevin J. Hill

Integrating Science and Community Values to Effectively Address Environmental and Land Use Conflict
By Herman A. Karl

The San Francisquito Creek CRMP—A Grassroots Example of Collaboration
By Patricia Showalter

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Using Games and Simulations in Integrating Science and Community Values

By Robert C. Barrett, Consultant to the U.S. Geological Survey

Introduction

The INCLUDE program at the U.S. Geological Survey (USGS) approached me about working with them in December 1998. I have long been interested in how to improve the ways our society could deal more constructively with differences. My background includes clerking for a federal judge, law practice, philanthropy, and service as a mediator and consultant in collaborative problem solving. From 1975 to 1983, I was a lawyer with an environmental law firm, dealing with controversial projects being reviewed under the National Environmental Policy Act and state versions of that Act. I saw firsthand how poorly outcomes derived from the adversarial process. From 1983 to 1991, I was, as the program officer at the William and Flora Hewlett Foundation, responsible for its grants in the environmental and conflict resolution programs. I learned a lot about improving outcomes by using more effective decision-making processes. For the past nine years I have specialized in mediating, facilitating, teaching, and consulting with public agencies about collaborative problem solving in a wide range of environmental and public issues.

I was retained by USGS in March 1999 to suggest and help plan activities for INCLUDE, which focuses on finding ways to integrate science with community based values in land use decision making. Prior to this, I had helped Herman Karl and Richard Bernknopf, the USGS originators of the INCLUDE program, design a game/simulation for a Stanford University class in environmental cost benefit analysis. The game had focused on the complex and controversial decision making relating to whether the runways at San Francisco International Airport should be reconfigured and extended, which would require extensive dredging and filling within San Francisco Bay. The game had been an unqualified success—both as a class exercise for learning how theoretical considerations are played out in the dynamics of a realistic “give and take” search for a consensus resolution of a series of complex policy issues, and as a demonstration for USGS scientists of how scientific and technical information is used by decision makers, advocates, and others with a desire to influence decisions.

Based on the discussions with USGS leaders in the wake of the airport game/simulation, I suggested that INCLUDE undertake a range of activities, including:

- Sponsoring a seminar series, featuring academicians who study decision making;
- Holding training workshops in collaborative problem-solving skills;
- Sponsoring a series of conferences to bring together representatives of different disciplines beyond traditional earth science researchers, such as economists, social scientists, philosophers, and those who study decision making and collaborative processes;
- Starting a working paper series to encourage a written dialogue on these topics;
- Becoming involved in consensus-building projects, where USGS would provide scientists and equipment for researching what stakeholders had already identified were

critical issues to a decision that needed to be made about an active community issue; and
- Developing games and simulations as a kind of "laboratory" to observe scientists and decision makers in action in realistic, but hypothetical, settings.

Since then USGS has undertaken activities in all of these areas, which are now being expanded. In this presentation, I will highlight our work with games and simulations.

What We Have Done with Games and Simulations

During the past 15 months, we have organized and run two multi-stakeholder games/simulations, which were used as class exercises in Stanford University classes in the Geology and Earth Systems Department and in the Law School.

The Airport Game, mentioned above, was run in March 1999; an expanded version was run in April 2000 for a law school class. The game focuses on the controversial project to expand and relocate the two runways at San Francisco International Airport to provide greater separation between them and longer length. This would make the airport more capable of handling larger aircraft of the future and more efficient in marginal weather, because currently when visibility is low, one runway must be closed. The dredging and filling of about 1,300 acres of the San Francisco Bay, however, is very controversial because of its damage to the environment. To help mitigate the damage, the airport proposes to buy thousands of acres of salt ponds owned by a commercial salt supplier and to convert them to healthy wetlands.

The game had eight stakeholder teams of two students each: the project proponent; environmentalist opponents, one team willing to support the wetland tradeoff and one team unwilling to do so; the business community, which is largely supportive of the expansion; the corporation that owns the salt ponds; local government representatives, who are divided over issues of business climate, noise, and environmental protection; and state and federal agencies with jurisdiction over Bay fill issues. The game was run over two class periods of about 75 minutes each, one focused on exchanging information about concerns and priorities, and the other focusing on options for resolution of the controversy "in principle." Before the classes, all stakeholders were given background instructions on the setting and some basic facts. They also had confidential instructions for their role, but did not have all the scientific information they would need. Between the two classes they were permitted to pose questions to a scientific panel of USGS scientists, who functioned as a consulting team; the students had "play money" accounts and posed their questions in e-mail by a designated time, with responses back within a few hours. When the game was run this year in the Law School, we added roles for lawyers advising client agencies, representatives, and other parties. In each case the students were fully engaged in their roles and came up with creative possible solutions to the problem.

The Creek Game focused on the complicated problem of habitat restoration and erosion and flood management on San Francisquito Creek, which forms the boundary between

two counties on the San Francisco peninsula and flows through parts of five municipalities. It was run in March 2000. The game had 21 stakeholders, although some roles were combined because the class was small. The roles included homeowners in various parts of the watershed, council members, environmentalists, business representatives, and others with concerns about public costs, engineering, habitat restoration, and other general environmental issues like traffic congestion and noise. The game/simulation was run over three class periods and permitted adding a session that simulated a typical public hearing to assess the previously identified options that would be chosen by a hypothetical "council" of municipal representatives. The emphasis in the game was on the cost benefit analysis of options and the assumptions that go into such an analysis.

What We Have Learned

Once the stakeholders are fully engaged in their roles, they mirror the perspectives of their "real" counterparts closely, although with interesting variations that can produce useful insights. Games and simulations are a powerful tool for "previewing" the dynamics of negotiations to balance and accommodate the spectrum of interests and concerns the stakeholders raise. They help in identifying which issues are of priority concern to various stakeholders and how strongly those stakeholders are likely to hold to their concerns. They also help in framing the scientific and social questions that scientists and policy-makers must grapple with, by showing the "give and take" of discussion about the issues. They educate the players about the complexity and interplay of the issues. And they highlight likely tradeoffs that may occur in real-life decision making. In the setting of a game or simulation issues of concern to lower-power stakeholders, who often are missing from real-life policy discussions, can be heard. Finally, games and simulations may provide an open-minded and creative atmosphere that can help in formulating innovative resolutions that parties would likely be reluctant to raise in the swirl of controversy in real life.

Games and simulations are relatively easy to produce and almost infinitely adaptable to different audiences, time frames, and purposes. However, they do require considerable information-gathering and preparation, if the instructions are to be realistic and based on "real-life" situations. Also, the instructions must be carefully written, and the game or simulation's rules must be closely followed to assure that its purposes can be achieved. It helps to have "dress rehearsals" to spot problem areas and make adjustments in the instructions.

One of the most useful hypotheses we have developed, although we have yet to test this, is that games and simulations can help to build public understanding of the multiple dimensions of complex public issues and thus public support for whatever choice is eventually made. They can also preview possible options for resolution that individuals may be reluctant to advocate in a charged political atmosphere.

What We Plan for the Future

We plan several expanded uses of games and simulations in the future. First, USGS is outfitting a "situation room" which will have computer terminals and other state of the art equipment for viewing maps and data electronically and rapidly on a series of screens simultaneously. We will be adapting mapping and information technology into the playing of future games.

Second, we also plan to run the Airport and Creek games with public participants in day-long workshop formats, where scientists will be available to answer questions and provide background information and citizens will play the roles of decision makers. This is a uniquely helpful role that USGS can play in helping local governments identify problems, seek information, build support for solutions, and thereby contribute to improving decision making.

Third, we are planning a large-scale game/simulation for an international conference next year focused on the risks that population concentrations along the Pacific Rim face from seismic activity and other environmental problems.

Finally, we have been considering staging games and simulations for USGS to use internally to identify some of the structural barriers to scientists participating more fully in decision making.

We have found that there is consistent interest and support among public officials for using games and simulations to help in the search for better understanding of how wiser, more stable, fairer, and more efficient decisions can be made about the policy issues our society faces.

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Threshold Monitoring and Evaluation in the Lake Tahoe Basin—A Real Time Approach Linking Science to Decision making

By Kevin J. Hill, Tahoe Regional Planning Agency

Introduction

The Tahoe Regional Planning Agency (TRPA) has recently created a program to develop a structure that evaluates the status of the nine key environmental threshold carrying capacities ("thresholds") in a real time manner and to create "what-if" scenarios using land use management practices to simulate its effects on environmental thresh-

olds. This approach is aimed at reducing the uncertainty associated with certain land use strategies and to improve our understanding of how the natural system functions. The Tahoe Basin is moving from a conventionally based monitoring approach to a decision based approach that uses probability as a tool to guide decisions. This paper will highlight uncertainties that exist currently in the Tahoe Basin, ways to reduce that uncertainty, and the risks and benefits of using a management approach that adapts to changing conditions.

Environmental Threshold Carrying Capacities

The Lake Tahoe Basin is guided by the Tahoe Regional Planning Compact (P.L. 96-551), created by the states of California and Nevada and ratified by the U.S. Congress, that directs the Tahoe Regional Planning Agency (TRPA) to be the lead agency in the attainment of nine environmental thresholds ("thresholds") while at the same time balancing socio-economic interests in the region. The nine thresholds are water quality, air quality, wildlife, fisheries, vegetation, noise, recreation, soil conservation, and scenic resources. TRPA is required to conduct threshold evaluations every five years to determine the attainment status of the nine thresholds. Recommendations and a strategy are developed and adopted for the next five years. One of the key recommendations that stemmed from the most recent evaluation in 1996 was the need to create a program that evaluated the thresholds in a real-time manner and provided the tools necessary to use the science to aid in the decision-making process.

Real-time Management Program (RTM)

TRPA has performed two threshold evaluations over the last ten years and while it showed the region is making progress in attaining and maintaining thresholds, adjustments are needed in the science and research programs to become more responsive to the decision-making process. The RTM program was created in response to a growing need to integrate the most recent and pertinent information into the decision-making process. The program is being designed to actively monitor and link the nine thresholds and socio-economic information, providing accessible information in a real-time manner. The program is in the process of producing annual evaluations of the threshold attainment and uses this information to create "what-if" scenarios to help decision makers with a range of policy choices. Monitoring in the Tahoe basin is shifting from a conventional monitoring approach to a decision-based approach that uses probability as a tool to guide decisions. This approach allows for integration of information across scales, between research and management, and provides for a common channel of communication. Risk associated with certain choices is quantifiable and helps identify areas of uncertainty and helps facilitate an adaptive management approach. The program is also developing modeling tools that estimate the probability of a physical state change in the environment due to a certain land use strategy.

Uncertainties

A certain amount of uncertainty still exists at Tahoe and area worldwide of how the natural system behaves in response to a specific land use strategy. Even more uncertainty exists when you incorporate the issues of economic and social issues.

Even with this uncertainty, it is widely agreed that successful implementation of land, air and water quality restoration projects is considered the only likely avenue to arrest further decline in lake clarity. Scientific efforts must be focused towards restoration objectives and coordinated so that information needed for land use decisions can be obtained in a more timely fashion. Implementation of projects and the research and monitoring efforts must go hand-in-hand if we are to abate the decline in environmental health in the Tahoe Basin.

Reducing the Uncertainty

One way to reduce uncertainty is to adopt an adaptive management approach. One of the principles of this approach is the need to apply experiments, which in some cases disrupt the natural system. Also key to this approach is the development of competing models or hypothesis about how a system works. An adaptive management framework is not often used because you have to deviate from the status quo, and it is not totally risk free. The watershed approach taken at Lake Tahoe for many decades recognizes that lake water quality is linked to upland watershed processes. A cornerstone of watershed management is a comprehensive understanding of (1) hydrologic, atmospheric, and ecological processes and their interactions, (2) real-time assessment of environmental conditions (air quality, water quality, forest health, biotic communities, etc.), (3) response to anthropogenic and natural disturbance, and (4) the ability to predict environmental improvement based on various management strategies. Serious concerns regarding ecological condition and long-term environmental protection underscore the need to provide the highest quality science to aid in problem resolution. Valid scientific data, with unbiased interpretation, has repeatedly provided decision makers in the Tahoe Basin with invaluable information and insight.

Steps toward Linking Science to Policy

An important first step for the scientific community to recognize is that information collected has to be relevant to land use managers. Management questions must drive the process of information collection with input from the scientific community. The information must also be packaged in a way so that its meaning and application are accessible to nonscientists. Scientists must work directly with managers to develop experiments and monitoring protocols, and all parties need to approach research and monitoring in a more integrated manner, working across disciplines. An information management system is needed and is currently being created, to integrate data from all sources to create a clearinghouse of information. The intent of this system is to provide for the management of data that is collected, providing real-time coordinated access to all interested parties, and to allow for community access to the information collected.

Land Use Decision Model

An effort between the U.S. Geological Survey (USGS), the Desert Research Institute (DRI) and TRPA, this project is attempting to integrate economic and environmental data within a geographically based framework to model different land use management strategies. The model focuses on quantifying the effects of different land use and regulatory choices on the total market value in the region. One objective of this exercise is to report optimal choices as those that maximize the total market value, while at the same time meeting environmental constraints, which in this case are the thresholds. This model is intended to provide the platform that uses probability as a tool to reduce uncertainty associated with many threshold questions

Science Advisory Group

The Science Advisory Group (SAG) was created in January 2000 by the signing of a memorandum of understanding (MOU) between TRPA and five academic institutions. The MOU established a committee to determine which environmental issues may benefit from broader research inquiry. The SAG develops and improves the communication and coordination among existing research groups and agencies working in the Tahoe basin to prevent duplication of efforts and provide the maximum interdisciplinary team work necessary to resolve the most important environmental issues related to research, monitoring, and land use decisions. Public and political support of land-use strategies used in the Tahoe Basin is strong, however uncertainty exists for certain strategies and the need for sound science to guide decision making in the future is recognized as a critical element for continued support of these strategies.

Summary

Lake Tahoe continues to lose clarity at the rate of one foot per year, as it has over the last 30 years. A sense of urgency exists at Tahoe to reduce the loss of clarity by the implementation of programs and projects at a pace not seen before. At this pace it is critical that we not only do the right thing, but reduce as much uncertainty with land use decisions as possible. As we move to a decision based approach to management of the lake and land at Tahoe, we must stand by the risks associated with experimentation used in an adaptive management strategy. Managers need information that reduces the uncertainty between the cost of implementing projects and best management practices and the benefit or value received from these improvements. There is a rapid paradigm shift occurring at Tahoe and more informed decisions are being made in a more real-time manner.

Integrating Science and Community Values to Effectively Address Environmental and Land Use Conflict

By Herman A. Karl, U.S. Geological Survey, Menlo Park, CA

The role of science in society is evolving as we enter the 21st century. The "contract" between science and society established after World War II stipulated that science is essential and that basic research meets national needs. This model of national scientific research served the country for 50 years. This stipulation led to the implicit belief held by many scientists and shared by many of the public that science alone can solve society's problems. However, we now know that societal issues are often complex, especially environmental policy and land-use issues, and involve diverse scientific, economic, political, cultural, ethical, and aesthetic values. Rarely, if ever, is scientific information alone the basis of public policy. This reality challenges the scientific community to define a new social contract that is in accord with the social and political conditions that characterize the twilight of the 20th century and the dawn of the 21st century. Under the terms of the new contract, science is still essential. However, the needs of the nation will dictate much of the research that is undertaken and funding for science will not be independent of societal issues and concerns. Not only does society demand the best science, now it also expects useful science, and ways must be found to bring science out of the ivory tower and in to the community.

As populations continue to expand, tensions between environmental preservation and economic development will exacerbate land-use conflicts. Quality of life for the 8-10 billion people who will inhabit the planet by the end of the 21st century will depend on how well we as a society resolve these conflicts. Under these conditions, interdisciplinary research and information derived from natural and social science data can provide tools that contribute to both policy analysis and decision making. Scientific information is not a panacea for solving these complex problems. However, it can help inform choices.

INCLUDE (integrated-science and community-based values in land use decision making), a component of the USGS Center for Science Policy is developing methods to integrate natural science, social science, and economic information and measures of cultural and community values such as ethics and aesthetics into participatory decision making processes. INCLUDE is designed to facilitate interaction among scientists and the community. It will employ collaborative problem-solving techniques to demonstrate that a mutual gains solution is possible for environmental and land-use disputes.

INCLUDE negotiations will usually be held at the place of the issue under consideration. Hypothetical games and simulations, based on real situations, developed by INCLUDE researchers and collaborators, will help preview the dynamics that occur in real-life negotiations. Moreover, simulations can help build public understanding of the multiple dimensions of complex issues. A situation room with computer, GIS, Internet, and teleconferencing capability will be available to hold negotiations and simulations that address issues of scope beyond the local community. Here scientists and stakeholders

can bring forward the fullest possible range of public interests and perspectives, to encourage a consensus on policy involving land-use and other environmental issues.

In addition to convening groups to explore problems and seek consensus, INCLUDE functions as a laboratory for decision making. Its exercises would allow for rigorous research into the role of science in the policy process. An overarching goal of INCLUDE is to achieve a better understanding of how science can be used in decision making and the role of natural science with respect to other discipline information and community values.

INCLUDE also has a commitment to education. By teaching consensus building, conflict negotiation, adaptive management, effective communication skills, and environmental ethics, it can support a culture of decision makers and stakeholders versed in science, and of scientists who appreciate the place of science in an effective policy framework. In this way, INCLUDE will help build a “community of scholars,” at work on integrated approaches to land-use policy.

To accomplish the above, projects that address land-use and environmental policy issues are designed in partnership with community stakeholding groups. The Creek Project, outlined below, is an example of a community-based project.

Many communities across the nation are struggling with issues of watershed management. Four watershed issues, in particular, are of concern to communities across the country: flooding, aquatic habitat restoration, dam removal, and TMDL (total mean daily load) impairment. Municipal governments, resource management agencies, and regulatory agencies urgently need sound scientific studies to inform decisions about these issues. These issues characterize San Francisquito Creek, the last riparian unchannelized urban creek in southern San Francisco Bay.

San Francisquito Creek is the boundary between two counties (Santa Clara and San Mateo) and flows through parts of five municipalities (Menlo Park, Palo Alto, East Palo Alto, Portola Valley, and Woodside). These communities range from extremely affluent to very impoverished, with the wealthiest communities in the upper watershed and the most impoverished in the lower floodplain. To deal with diverse values and competing views of land-use in the watershed, the San Francisquito Creek Joint Powers Authority (JPA), comprised of the City of Menlo Park, City of Palo Alto, City of East Palo Alto, the Santa Clara Valley Water District, and the San Mateo County Flood Control District, was formed in May 1999.

The tributaries to San Francisco Bay, including San Francisquito Creek, once supported thriving anadromous fisheries, featuring steelhead trout and salmon. Through a variety of causes, mostly anthropogenic in nature, these fisheries have been severely restricted, and now support dwindling fish populations in a fraction of the tributary creeks. Both species are federally listed special status (threatened or endangered) species. Impairment of the fresh water fishery caused San Francisquito Creek to be listed on the 1998 Clean Water Act Section 303(d) list of impaired water bodies, due to sedimenta-

tion. Sediment deposits that create physical barriers to fish migration, or that “silt in” fish spawning gravel or rearing pools are thought to contribute significantly to this problem in the San Francisquito Creek watershed.

In spring 1998, runoff from a series of heavy winter rains resulted in flooding in the lower San Francisquito Creek watershed, causing $28 million dollars in property damage. The unprecedented magnitude of the flood-related damages and the potential threat to human health and safety has sparked investigations into the causes and mechanisms of flooding in this watershed, and efforts to provide earlier warning of potential flood conditions. Issues related to sediment supply (including bank stability and erosion) and deposition (especially pertaining to reductions in flood storage and conveyance capacity) are current focal points. The amount and quality of sediment contributed to the creek is also affected by the percent of impervious coverage within the watershed. The percentage of impervious coverage is related to urbanization. Issues of development are vexing problems for municipal governments.

Suggested solutions to address issues of flooding range from paving over the creek to letting it regain a natural channel in its lower reaches. Tempers flare among citizens that live within the creek’s floodplain when they discuss these issues. Clearly the diverse subcultures that make up the communities in the watershed hold different values. No one community, or subculture, knows the answer to resolving the complex problems of managing an urbanized watershed.

The principal purpose of the Creek Project is to work with community stakeholders in a participatory process to develop integrated approaches to land-use and environmental policy. Stakeholders in the community are actively engaged with discipline experts in project design and implementation. The objectives of the Creek Project are to: assist the consensus building process undertaken by the San Francisquito Creek Coordinated Resource Management Planning Process committee and Joint Powers Authority; help in identifying and gathering scientific and technical information important to decision making about the creek; highlight possible options for minimizing and/or controlling erosion and flooding on the creek; highlight possible options for habitat restoration for steelhead and other native species; better understand the interplay among the various stakeholding groups in a consensus-building setting; help in educating the public and decision makers about trade-offs that will be likely in finding mutual solutions to creek issues.

The Creek Project is a vehicle to experiment in designing a collaborative problem-solving process to achieve balanced solutions to land-use issues for the purpose of improving the quality-of-life of all citizens. It is through this process that INCLUDE brings science out of the ivory tower and in to the community.

The San Francisquito Creek CRMP— A Grassroots Example of Collaboration

By Patricia Showalter, Coordinator, San Francisquito CRMP

San Francisquito Creek drains about 42 square miles of the San Francisco Peninsula. The headwaters form just to the west of the San Andreas Fault, and the creek system drains east into the south end of San Francisco Bay. The creek forms the county line between San Mateo County and Santa Clara County. In its 13-mile run to the Bay, the creek flows through the towns of Woodside and Portola Valley, the extensive land of Stanford University, and the cities of Palo Alto, Menlo Park, and East Palo Alto. In a sense this political complexity has saved the natural character of the creek. No flood works have been constructed and the San Francisquito Creek watershed has sustained the only healthy run of native steelhead trout, a threatened species, in the South Bay.

In 1994 the San Francisquito Creek Coordinated Resource and Management Planning Process (CRMP) was formed to follow the natural drainage boundary. It was sponsored by the Peninsula Conservation Center Foundation. Over 30 stakeholder groups signed the signatory agreement to work together to *foster a diverse and healthy watershed, valued as a natural and community resource, in a manner consistent with public health and safety and respecting property rights.* The stakeholders include local governments and water districts, state agencies such as the California Department of Fish and Game and the San Francisco Regional Water Quality Control Board, Stanford University, and many neighborhood and environmental groups. Recently, the U.S. Geological Survey (USGS) has taken an active part in the CRMP.

At its most essential, the CRMP is an ongoing forum where interested people work together on creek related issues that are based on natural, not political boundaries. At CRMP's monthly steering committee meeting representatives of the signatories agencies share information and work on problems that are brought to the group. The public is welcome. The amount of consulting power available at steering committee meetings is truly amazing.

Since February 3, 1998, when the flood of record occurred, the spotlight has been turned up on our creek. Over $28 million of documented damage was incurred, which included damage to over 400 homes and many businesses. A Joint Powers Authority between the local governments has formed and hopefully will be able to balance flood protection and preservation of the natural resources.

I am here to share my experiences with you about CRMP's collaboration with the USGS. As a past employee of the USGS, one of my goals has been to get the USGS involved as an active stakeholder. The USGS Western Regional Headquarters in Menlo Park is located in the watershed. About a year ago, I was fortunate to make contact with Herman Karl, who wanted to figure out ways to improve the use of science in local decision making. He has been leading an active collaboration ever since. It is a great service to the CRMP.

There are four messages I would like to share with you:

First, the USGS is committed to learning how to work with community groups to provide scientific information that can improve the quality of local decisions. They understand that the scientific information may need to be presented in a different form to be comprehensible to nontechnical audiences, and are willing to make the changes necessary to get it in the proper form. The wide range of stakeholders involved in the CRMP provide a good cross section of people who can evaluate which forms work best as well as when the input is most useful.

Second, games and simulations put together by the USGS have been a useful scientific tool. Simulations teach the people who play a great deal about the problem. In our case, a flood solution game taught the players something about the many issues involved and a great deal about the level of complexity of figuring out a flood solution. From a scientific point of view, the games identify the questions that need to be answered to provide the information required in an extremely efficient manner. As those of us who have been involved in long-term scientific research know, asking the correct question is crucial, and it often takes years to discover what the *real questions* are. Games are a very efficient way to identify the real questions.

Third, champions are required to make collaborative efforts work. Each organization needs to have some individual who takes ownership of the effort and communicates back and forth. The champion does not need to be a highly placed individual in the organization, they just need to be someone who is willing to do the work. All of us should serve as champions.

Fourth, champions collaborating together on common problems form a community capacity to get things done that was not there before. This community capacity is really the backbone of alternative dispute resolution. It gets people involved in solving problems outside of a legal setting in a nonadversarial manner.

Please feel free to contact me for more information at: Pat Showalter, San Francisquito Creek CRMP, Peninsula Conservation Center, 3921 East Bayshore Road, Palo Alto, CA 94303 or crmp@pccf.org.

Negotiated Rule Making

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

Deborah Dalton, Conflict Prevention and Resolution Center, Environmental Protection Agency, Washington, D.C.

Panelists

Juliette Falkner, Office of the Executive Secretariat and Regulatory Affairs, U.S. Department of the Interior, Washington, D.C.

Gregory Sobel, Environmental Mediation Services, Sudbury, MA

Maria Burks, Cape Cod National Seashore, National Park Service, South Wellfleet, MA

Panel Abstract

This panel will briefly describe the process and advantages of negotiated rule making and then address specific “lessons learned,” such as doing a good conflict assessment, how to identify and choose stakeholders as committee members, dealing with the FACA requirements, how to involve all relevant agency or departmental personnel productively, dealing with process ground rules, how to obtain good facilitation services, and how to implement the agreements reached. These issues will be discussed in the context of specific case examples. Background documents on negotiated rule making, case study articles, best practices, and other information will be available for participants.

Individual Papers

Negotiated Rule Making/Regulatory Negotiation
By Deborah Dalton

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Negotiated Rule Making/Regulatory Negotiation

By Deborah Dalton

What Is a Rule?

A rule or regulation is the equivalent of an operating or implementation manual for a part of a statute or act of Congress. A rule gives those subject to its requirements more detailed instructions or prohibitions regarding activities that are addressed by the statute.

How Are Rules Usually Written?

Generally, a federal agency's staff drafts the text of a proposed rule. After circulation and comment within the agency, the rule will be printed in the *Federal Register* as a proposed rule. The public is then invited to comment on the rule. After reading and analyzing the public's comments the agency may revise the rule to incorporate suggestions or eliminate problems identified as a result of the analysis. The rule is then published in final form in the *Federal Register* and becomes effective on the date listed in the notice. It is then incorporated into the government's *Code of Federal Regulations*, which lists all currently applicable regulations.

What Is Negotiated Rule Making?

Negotiated rule making is a process which brings together representatives of various interest groups and a federal agency to negotiate the text of a proposed rule. The goal of a negotiated rule-making proceeding is for the committee to reach consensus on the text of a proposed rule.

How Is Negotiated Rule Making Different?

In a negotiated rule-making proceeding, a well-balanced group representing the regulated public, community and public interest groups, and state and local governments joins with a representative of the federal agency in a federally chartered advisory committee to negotiate the text or the outline or concept of a rule before it is published as a proposed rule in the *Federal Register*. If the committee reaches consensus on the rule then the federal agency can use this consensus as a basis for its proposed rule. The proposed rule is still subject to public comment. If consensus is not reached, then the agency proceeds with its normal rule-making activities.

What Are the Advantages of Negotiated Rule Making?

Federal agencies that have used negotiated rule making have identified several advantages to developing a rule by negotiation before notice and comment. The regulatory negotiation process allows the interested, affected parties a more direct input into the drafting of the regulation, thus ensuring that the rule is more sensitive to the needs and limitations of both the parties and the agency. Rules drafted by negotiation have been found to be more pragmatic and more easily implemented at an earlier date, thus pro-

viding the public with the benefits of the rule while minimizing the negative impact of a poorly conceived or drafted regulation.

Because the negotiating committee includes representatives of the major groups affected by or interested in the rule, the number of public comments is reduced. The tenor of public comment is more moderate. Fewer substantive changes are required before the rule is made final.

The committee can draw on the diverse experience and creative skills of the members to address problems encountered in writing a regulation. Often the group together can propose solutions to difficult problems that no one member could have thought of or believed would work.

How Does the Process Work?

The federal agency establishes a formal advisory committee under the Federal Advisory Committee Act. A balanced mix of people is invited by the agency to participate and represent some identified interest or set of interests. Generally, committees are composed of between 12 and 25 members representing both the public and private sectors. A neutral facilitator or mediator is used to convene the committee and to manage its meetings.

Meetings are announced in the *Federal Register* (and sometimes in local or trade press) and are open to observation by members of the public. The number of meetings held depends on how complicated the rule is to draft, how much controversy there is among the committee members, and what the deadline is for the rule to be published and implemented.

Generally, only the committee members speak during the meetings, although provisions are made for input by members of the audience. Caucuses can be called by committee members to speak with their constituency or with other members of the committee; caucuses may or may not be open to the public observers.

Decisions are made by consensus, not by majority vote. The committee discusses and decides upon their own definition of consensus prior to the start of its deliberations. Often the consensus is generally defined as an agreement by all parties that they can live with the provisions of the rule when taken as a whole package.

If consensus is reached, the agency will use it as a basis for their proposed rule. Committee members agree to support the rule as proposed if there are no substantive changes from the consensus agreement.

For additional information on regulatory negotiation:

Negotiated Rulemaking Sourcebook, 1995, Administrative Conference of the US; written and edited by David Pritzker and Deborah Dalton. Available from Deborah Dalton at dalton.deborah@epa.gov.

Agency Contacts

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What Have We Learned about Training Federal and State Agency Staff for Collaboration and Consensus?

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

Chris Carlson, Policy Consensus Initiative, Santa Fe, NM

Panelists

Mike Eng, U.S. Institute for Environmental Conflict Resolution, Tucson, AZ

Lucy Moore, Lucy Moore Associates, Inc., Santa Fe, NM

Doug Thompson, U.S. Environmental Protection Agency, Boston, MA

Panel Abstract

Formatted in a Samoan Circle, this session will enable everyone to participate in a discussion of what makes for effective training, especially within federal and state agencies. Trainers and agency representatives, who themselves train or hire trainers, will talk about what kind of training enables trainees to incorporate and practice new skills. Thousands of dollars are spent every year on training. What have we learned about what works and what does not? How can training be improved? This session will look at opportunities for new approaches to training such as joint federal-state training to develop capacity and relationships, and the use of new technologies such as distance learning.

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Perspective from the Negotiating Table: Enhancing One's Effectiveness so ADR Isn't DOA

Wednesday, May 17, 2000—3:30-5:00 p.m.

Moderator

Thom Corcoran, ESI Communications, Portland, OR

Panelists

Melody Kreimes, Kreimes Associates, San Luis Opisbo, CA

Emmett Fiske, Washington State University, Pullman, WA

Panel Abstract

The role of a neutral third party in structuring and facilitating an effective ADR process begins long before the disputants actually sit down at "the table." The panelists will provide an overview of conceptual frameworks for building consensus and resolving environmental disputes, and then discuss techniques and tools for dealing with particularly challenging or complex situations. Strategies for avoiding a number of potentially fatal problems both before and during a group ADR process will also be discussed. An interactive discussion with the audience will focus on the following questions: What constitutes third-party "effectiveness"? What are the most difficult challenges you face, either within an ADR process or as a practitioner? How do you rebuild trust in a group when it has been damaged?

Individual Papers

Developmental Facilitation and Environmental Conflict Resolution
By Emmett P. Fiske, Ph.D.

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Developmental Facilitation and Environmental Conflict Resolution

By Emmett P. Fiske, Ph.D.[1], Washington State University

Abstract

Environmental conflicts can be incredibly complex and polarizing, given the high level emotional intensity through which diverse parties defend positions and push distinct (often opposing) outcomes. Several of the early casualties in such verbal (and nonverbal) skirmishes are tolerance and communication—people stop listening to those espousing contrary views and begin associating exclusively with like-minded supporters. This inward-turning, circle-the-wagons mentality makes it very difficult for those seeking improvement to intervene with appropriate actions through which to diffuse tensions and initiate dialogue. And yet if nothing is done, the conflict will probably become more heated—with inflammatory rhetoric spreading the conflict beyond its initial borders to consume the passions of ever-increasing numbers of people.

This presentation examines the various *roles* played, *perspectives* held, and *conceptual frameworks* utilized by individuals involved in environmental conflict resolution (ECR) processes.[2] Such processes normally pass through three distinct phases: initiation and preparation, actual multiparty negotiation to reach agreement, and implementation of agreements via public decision making procedures. Our discussion will focus on intervention practices that can be employed by third parties (particularly developmental facilitators) to stimulate dialogue among the various perspectives and roles involved in contentious natural resource issues.

[1]Prepared for presentation at the conference on "Alternative Dispute Resolution and Natural Resources: Building Consensus and Resolving Conflicts in the Twenty-First Century," held in Tucson, Arizona on May 16-19, 2000. Fiske is an Organizational Effectiveness Specialist in the Department of Rural Sociology located on the main campus of Washington State University in Pullman, Washington. Additional information may be obtained via e-mail (fiske@wsu.edu) or telephone (509-335-8623).

[2]*Collaboration* is the bedrock upon which ECR is built: conflicts are resolved by involving all parties in voluntary processes through which perspectives are presented, discussed and incorporated in alternatives leading to desirable outcomes. By listening to (and reflecting upon) one another's views about the conflict, participants gain new insights and greater knowledge that can be put to constructive use in shaping collective responses. *Consensus* forms the building blocks allowing collective responses to take shape. With consensus, decisions can only be reached through a process that encourages each participant to listen carefully, ask questions for clarification, and share understandings with others around the negotiation table. When there is disagreement, participants are responsible for exploring alternative avenues for reaching agreement. This intense interaction is thought to unleash participant creativity and trigger synergistic alternatives that everyone can support. And since the people directly affected by the conflict are actively participating as negotiators in shaping potential outcomes, there is greater likelihood that whatever agreement is reached will therefore be implemented.

INTRODUCTION

Environmental conflict resolution (hereafter referred to as ECR) is a recent entrant to the field of dispute resolution. Whereas most other dispute resolution approaches[3] determine outcomes through processes in which one party gains at the expense of another, ECR is characterized by all parties (the negotiators) affected by a conflict being able to sit down voluntarily and resolve their differences in ways everyone can support. Negotiators often call upon third parties[4] to assist them with process design and management.

Normally, ECR processes are initiated by someone with sufficient authority and/or stature to capture the attention of the various *stakeholder groups* involved in or affected by the conflict. This person (the *convener*) may contract for the services of a *third party* to conduct a preliminary review of the conflict. Such a review involves the compiling of relevant background information on the conflict as well as identifying each group, organization or agency having a stake in its outcome (Carpenter and Kennedy, 1988, p. 75; Cormick *et al.,* 1996, p. 30).

Should preliminary review indicate that negotiation holds potential promise for improving the situation, the third party will conduct a *conflict analysis* (Moore, 1986, pp. 78-102; Carpenter and Kennedy, 1988, pp. 67-91) or *diagnosis* (Schwarz, 1994, pp. 67-99). This activity will utilize a combination of data gathering techniques involving direct observation, the review of secondary source materials (from such sources as meeting minutes, research reports, newspapers and magazine articles), and personal interviews to obtain much more detailed and in-depth information on the conflict. Based upon a careful assessment of information thus obtained, the third party will then design an appropriate *intervention* strategy for bringing the various parties to the negotiation table.

Seasoned third party interveners recognize that just as with truth and beauty: *reality* lies in the eye of the beholder. Conflict exists because multiple (often contradictory) realities are being perceived and acted upon simultaneously by the variously affected publics. Stated more precisely: conflict exists because there is an *expressed difference between at least two interdependent parties who perceive incompatible goals, scarce (tangible) resources, threats to or frustration over (intangible) existential needs and values, or interference from another party in achieving their goals or realizing their identities* (Coser, 1967; Moore, 1986; Bauer and Watt, 1990; Rothman, 1997).

[3]For example, the judicial system as well as governmental entities such as state legislatures, agencies, commissions and their local government counterparts.

[4]Third parties are individuals having no stake in the outcome of disputes who help people caught up within them achieve satisfactory results. Third parties do not come to the negotiation table uninvited; they serve at the pleasure of the negotiators and are expected to act fairly and impartially while fulfilling their duties during the negotiation process. *Facilitators* are third-parties who preside during the negotiation process to enhance communication and assist in the discussion so that all parties are able to express their views and participate fully. *Mediators* fulfill the same process functions as facilitators, but additionally are expected to work as needed on substantive issues with individual negotiators or caucuses between negotiation sessions to help reach agreement.

Environmental conflicts are further characterized by:

- *Multiple parties* (public and private sectors, regulators and users, with different levels of resources and experiences to bring to bear on the conflict);
- *Multiple issues* (various definitions of the conflict, differences of opinion on what is fact and what is fiction, treating the conflict as separate and distinct versus seeing it as interconnected with other issues);
- A *high degree of uncertainty* (given the difficulty of predicting the impact of proposed actions on the future);
- A *high level of emotional intensity* (since individual livelihood and way of life, community well-being and survival, resource protection / preservation, or continued business solvency may be at risk if a contrary decision is reached);
- *Distinct root causes* for the conflict (conflict is perceived as competition over resources and interests or as a threat to one's identity and values);
- Any potential remedy holds direct *public policy implications* (since statutory authority and jurisdictional interpretation and application by local, state, tribal, federal and/or international governments will determine whether implementation actually occurs).

—Emrich, 1982; Carpenter and Kennedy, 1988; Rothman, 1997

Perspectives on Environmental Conflict

People react to environmental conflicts from a variety of perspectives and circumstances (adapted from Bolman and Deal, 1984). People within local government tend to focus on rules, roles and responsibilities. They deal with conflict by shifting personnel, drafting new legislation, and revising agency procedures. Others may be more concerned over the impact of proposed changes in land use patterns on their continued enjoyment of community facilities, services and natural resources (such as open space, wetlands and watersheds). They place a high value on participating in environmental conflict resolution processes in order to articulate their concerns and help educate others.

Other residents are highly attuned to environmental politics and to the shifts in the distribution of power. They are skilled at building coalitions and changing them as often as necessary to maintain the upper hand in conflict situations. And yet others look for the deeper meaning in the various environmental conflicts impacting upon everyday life. They attend to environmental symbols and rituals as important ways of connecting one's culture and traditions with an uncertain future.

When environmental conflicts or controversies arise, people interpret them through the "lens"[5] which they find most comfortable. They bring their various interpretations—all of which are relevant—to complex situations, in the hope of reaching satisfactory solu-

[5]Lenses, frames, and perspectives are interchangeable terms describing how individuals, in relating to the world around them, make sense of what is occurring. Our various interpretations and understandings of what we "see" influence how we decide to respond or react. The phrase "seeing the world through rose-colored glasses" illustrates their dual nature: frames give us comfort and predictability in the midst of uncertainty while simultaneously discouraging contrary interpretations (and potentially new understandings) from being perceived.

tions. Though most have a common desire to resolve the situation, too often they are unable to untangle the conflicting points of view without skilled intervention.

Bolman and Deal (1997) have identified four distinct lenses (or frames) through which individuals interpret and respond to the world around them. Individuals employing the *structural* lens concentrate on developing the necessary frameworks (complete with clearly delineated lines of authority, stated goals, designated roles, and responsibilities) for task completion. If all the "pieces" mesh together precisely (much like gears in a *machine*) the task will get done within the designated time period. Negotiation processes serve to coordinate task completion.

Human resource framers focus on people and their needs, and are concerned about developing processes through which such needs get articulated, discussed, and satisfied. Such interactions build strong relationships and can convert caring strangers into members of the *family*. Negotiation processes provide the forum through which values get expressed and needs are met.

People possessing the *political* frame look at life in terms of conflicts and power struggles and attempt to influence the allocation of scarce resources. With the right strategies and tactics, people can build coalitions of sufficient strength to control the process and determine its outcome. Negotiation processes serve as one of the *arenas* in which battles are won or lost.

Symbolic framers attempt to find meaning in the midst of chaotic processes, confusing tasks and ambiguous outcomes. Unlike other framers, these individuals do not assume that people act rationally—that by doing all the right things at the right times in precisely the right order the desired outcome will be realized. Thus, when negotiators are unable to reach agreement we should not be surprised. Negotiation processes serve as *theaters* in which the actors—through myths, rituals, and ceremonies—enact scripts that help us make sense of circumstances beyond our control.

As Bolman and Deal repeatedly emphasize, events can be simultaneously interpreted in a variety of ways, each of which is valid, and yet taken by themselves are usually incomplete. These multiple realities make communication very difficult, because the same event is being understood as serving distinct purposes. In the midst of such complex community realities, the most pressing challenge facing negotiators and third parties alike is *selecting the frame that can best make meaning of the situation*, and then *effectively conveying that meaning to others*.

It is quite likely that *all of the above frames* come into play as diverse groups and interests start coming to grips with the conflict and determining respective actions. In order to intervene effectively, third parties need to possess the ability to perceive and understand situations from each of these distinct vantage points. This ability to *reframe* the situation is particularly useful when the frame with which third parties are the most comfortable no longer seems able to grasp the meaning of what is unfolding before their eyes.

The following table attempts to capture each frame's *salience*[6] in helping third parties understand others' behaviors as perceived changes in the status quo begin generating conflict:

Table 1: Salience of Frames throughout the Environmental Conflict Resolution Process

Question Asked	Likely Response from People Utilizing Each of the Frames			
Prior to Start of Actual Negotiation				
	Structural	*Human Resource*	*Political*	*Symbolic*
1. How much conflict is present?	Low to moderate	Moderate	Moderate to high	Moderate to high
2. How much ambiguity and uncertainty is present?	Low to moderate	Low to moderate	High	High
3. Are we working top down or bottom up?	Top down	Top down	Bottom up	Top down or bottom up
4. How important is the technical quality of the decision?	Important	Unimportant	Unimportant	Unimportant
5. How important are commitment and motivation?	Unimportant	Important	Unimportant	Important

[6]Salience refers to each frame's ability to illuminate certain circumstances in ways that provide greater meaning to the interpreter.

6. How scarce are resources?

Moderately scarce
Moderately abundant to abundant
Scarce (or getting scarcer)
Scarce to abundant

During the Negotiation Process

7. How do you deal with conflict?
   - Maintain organizational goals by having authorities resolve conflict
   - Develop relationships by having individuals confront conflict
   - Develop power by bargaining, forcing, or manipulating others to win
   - Develop shared values and use conflict to negotiate meaning

8. What happens when your approach doesn't work?
   - Realign roles and responsibilities to fit tasks and environment
   - Maintain a balance between human needs and formal roles
   - Redistribute power and form new coalitions
   - Maintain an image of accountability and responsiveness; negotiate new social order

9. When you realize that some type of intervention is needed to address the changed environment: what do you envision?
   - Strategies to set objectives and coordinate resources
   - Gatherings to promote participation
   - Arenas to air conflicts and realign power
   - Rituals to signal responsibility, produce symbols, negotiate meaning

10. What do you hope the negotiation process will achieve?
    - Keep organization headed in the right direction
    - Keep people involved and communication open
    - Provide opportunity for individuals and groups to make interests known
    - Develop symbols and shared values

11. What is the purpose of meetings?
    - Formal occasions for making decisions
    - Informal occasions for involvement, sharing feelings
    - Competitive occasions to win points
    - Sacred occasions to celebrate and transform the culture

12. Why do you choose to participate in meetings?
    - Transmit facts and information
    - Exchange information, needs, and feelings
    - Serve as vehicle for influencing or manipulating others
    - Tell stories

13. How do you view decision making?
    Rational sequence to produce the right decision
    Open process to produce commitment
    Opportunity to gain or exercise power
    Rituals to provide comfort and support until decision happens

14. How do you motivate others to implement any decision reached?
    Economic incentives
    Growth and self actualization
    Coercion, manipulation, and seduction
    Symbols and celebrations

Inability to Resolve Conflict

15. When decisions don't get made, or don't go in your favor, what is the result?
    Unpredictability, throughout the organization
    Feeling of confusion, and chaos incompetence, neediness and powerlessness among individuals
    Loss (defeat), and greater conflict
    Loss of meaning; transition ritual to provide symbolic healing

(Adapted from Bolman and Deal, 1997, pp. 267-268, 271 and 321)

What this table suggests is that in low-level conflict situations where resource scarcity is not really an issue, the *structural* frame will likely be most salient: very little ambiguity and uncertainty are present; rules, roles, and responsibilities (as well as tasks and goals) are clearly defined and articulated; and decisions get made on the basis of technically-sound information.

With increased conflict comes greater ambiguity and uncertainty, and greater pressure on the existing order (since the current approach is not working) to try something different. People begin losing faith in the existing order's ability to remedy the situation. The existing order responds by proposing an alternative, inclusive approach that realigns roles and responsibilities to coordinate the additional people (particularly third parties) being brought into the mix. The existing order proposes the goals for this alternative approach as well as specifying tasks and time lines (usually via a work plan).

The participants in the negotiation process, however, have differing opinions about what has transpired, what information is needed, how decisions should be reached, and what (if anything) should be done. When we reach this point, the *human resource* and *political* frames appear to be particularly salient. People's needs and values get expressed in meetings where group norms keep hostilities in check, and consensus-based decision making means that task completion falls further and further behind specific target dates. As frustration sets in, some negotiators press for realigning the process with the work plan (*structural*); others want to gain clarity via greater deliberation around the negotia-

tion table (*human resource*); and yet others may propose "time-outs" so that their respective caucuses can decide appropriate next steps (*political*).

About now the negotiation process can really use someone with a *symbolic* frame to make sense of what is happening. Through formal presentations as well as spontaneous events, the symbolic framer will recast the experience (perhaps through humor, and/or story telling) in terms that give new and special meaning to all negotiators.

The *symbolic* frame is especially salient at the conclusion of negotiation processes, when either celebrations or wakes are in order. One can count on the symbolic framer recasting whatever has occurred in words and props that uplift and inspire. The symbolic framer heals people's spirits so they can work together another day.

Once the negotiation process has run its course, attention returns to the *political* frame for implementation (if the outcome is positive) or coalition formation to redistribute power (if the outcome is negative, with the existing order emerging wounded and weaker—fair game for attack).

Conceptual Frameworks for Third-Party Intervention[7]

The various approaches available to third parties when intervening in environmental/natural resource conflicts have evolved from quite distinct academic traditions. The *mediation* school traces its origins to labor and industrial relations (for example, the U.S. National Labor Relations Board) and the role of the legal profession in helping disputants identify their *mutual interests* in resolving particular conflicts (Bush and Folger, 1994), while the *facilitation* school draws heavily upon the experience of human relations practitioners (for example, Kurt Lewin's pioneering work in the late 1940s with t-groups) in getting disputants to engage in a *dialogue* through which perspectives can be exchanged so that a fuller picture can emerge of the conflict (Rothman, 1997; Schwarz, 1994). Not surprisingly, the mediation field today tends to be populated by lawyers and political scientists, while facilitation seems particularly attractive to social scientists from the disciplines of psychology, sociology, anthropology and education. (For a more extensive treatment of the history and evolution of the two approaches through the 1980s please refer to Carbonneau, 1989 and Bolman and Deal, 1997).

The first (and still currently the most widely utilized) model for ECR was initially developed at Harvard University in the early 1980s (Fisher and Ury, 1981) and later elaborated by people associated with the Harvard Negotiation Project (Susskind and

[7]The *transformative* approach (Bush and Folger, 1994; Maser, 1996) is excluded from this discussion for several important reasons: conflicts where such an approach would be appropriate typically involve only two parties (for example, a dispute between two neighbors; a dispute between a landlord and tenant; divorce mediation; child custody cases; small claims court) who work with a mediator to settle their differences. The settlement-seeking process normally runs its course within a single session (usually within several hours) during which mediators exert considerable (some might say "heavy-handed") control of the process. The transformative emphasis on settlement flies in the face of the other approaches—all of which emphasize the importance of core values and non-directive behavior by third party interveners.

Cruikshank, 1987; Carpenter and Kennedy, 1988; Ury, 1991; Hall, 1993; Susskind and Field, 1996). Originally called “principled bargaining,” “principled negotiation,” or “negotiating on the merits,” the approach has come to be known as *interest-based problem solving* (hereinafter referred to IBPS) within the ECR community

A real strength of IBPS is its phased approach to conflict resolution—beginning with prenegotiation, proceeding through negotiation, and ending with implementation. The model has evolved to now include 13 distinct steps through which third parties lead negotiators toward resolution. The IBPS model is both *prescriptive* (that is, it lays out how conflict resolution ought to be done, as evidenced in the writings of Fisher and Ury) and *descriptive* (it tells how to do it by describing how highly effective negotiators and third parties function, as detailed in Carpenter and Kennedy). Not only does the model provide potential practitioners with guiding principles and sequenced activities for resolving conflicts, it also details how such principles and activities can be realized.

While the IBPS approach certainly has much to recommend its use as a model through which to resolve environmental conflicts, it does have several limitations. First, its directed obsession in generating a product (be it a two-party settlement or a multiparty agreement) tends to limit negotiator opportunities for full discussion and sufficient exploration of alternative values and perspectives; mediators can have an undue influence on what does, and does not, get discussed (Kolb, 1993; Kritek, 1994; Schwarz, 1994; Maser, 1996; Rothman, 1997). Secondly, negotiations are not always about solving problems or finding good solutions; often, they involve intangible issues whose full disclosure and discussion can lead to personal growth and “transformation” (Bush and Folger, 1994; Rothman, 1997).

What happens when one or more negotiators views an environmental conflict in terms of values and identity rather than interests and resources? For example, neighborhood parks can be perceived as resources (to be utilized and protected), as indicators of improved “quality-of-life” (that provide us with a picture of community “health”) or as symbols in themselves (that provide deeper meaning and/or spiritual significance). For certain negotiators, the conflict may have nothing to do with resources and territory, and everything to do with dignity and meaning in our lives. What might be done within the negotiation process to surface and discuss differing values?

This critical question was recently addressed by Jay Rothman in the book *Resolving Identity-Based Conflict in Nations, Organizations, and Communities* (Rothman, 1997), summarizing his experience in facilitating conflict resolution processes between Israelis and Palestinians in Jerusalem as well as through training negotiators from such diverse yet potentially explosive places as Cyprus, South Africa, North Ireland, Sri Lanka, and the former Soviet Union. His book offers an alternative framework that forces negotiators to delve into unpleasant pasts, vocally express their frustrations and bitterness, and come to understand the needs and values as well as cultures and traditions shaping their identities and underlying their desires for dignity and recognition, meaning and purpose. Once individual negotiators are able to recognize the forces influencing their own behavior, they are better able to modify such behavior to accomplish desired outcomes.

By expanding the conflict discussion to emphasize the intangible topics normally excluded from IBPS processes, Rothman has effectively rectified one of that model's serious shortcomings. This is an important contribution, since environmental conflicts tend to be defined by the variously-affected parties in both *identity and interests* terms. His *values-based problem solving* model is both prescriptive (Rothman, 1997, pp. 1-84) and descriptive (Rothman, 1997, pp. 85-166), utilizing an "ARIA" sequence (comprised of the initial letters from his antagonism, resonance, invention, and action phases) to guide negotiators. Each phase is briefly described below.

The first phase (*antagonism*) is clearly key to unlocking what really is at stake for negotiators. Rothman's initial questions are aimed at eliciting raw-edged reactions whereby negotiators can lash out, project blame onto others and abdicate any personal responsibility in fanning the flames of conflict. Once the venting has passed (hopefully, with negotiators still at the table), Rothman shifts to more reconciliatory questions (*resonance*) that encourage negotiators to look at the conflict from a different vantage point and move toward collective resolution. With negotiators now working together (*invention*) on how to collectively resolve the problem, the last set of questions focus on implementation (*action*).

The major limitations of the values-based problem solving approach are two-fold: exclusive application thus far to two-party conflict situations, and (by definition) lack of experience in addressing multiparty community conflicts. These criticisms are tempered through realization that the model has been in circulation very briefly, and is only now likely to be gaining converts within the third party community.

The *integrative* model presents a way in which the strengths of the interest-based and values-based approaches can be combined to stimulate personal growth and improve interpersonal relationships while also solving problems and generating favorable outcomes (Schwarz, 1994; Fiske, 1991). This approach draws upon the work team effectiveness literature (particularly Hackman, 1987; and Hackman, 1990) to suggest a new way for conceptualizing the ECR process.

This approach has evolved from initial conceptualization by Argyris and Schon (Argyris, 1970; Argyris and Schon, 1974) to its application to group (Hackman, 1987; Hackman, 1990) and third party effectiveness (Schwarz, 1994). The approach builds upon organizational psychology's passion for uncovering what make groups "tick," and is beginning to have a profound impact on group facilitation and its application to conflict resolution processes.

The "group effectiveness" model first appeared as J. Richard Hackman's contribution to the *Handbook of Organizational Behavior* (Lorsch, 1987). Hackman begins by characterizing his area of focus (the work group) before proceeding to discuss factors influencing its effectiveness. In brief, *work groups are open social systems* (with boundaries containing specific, yet interactive, roles that distinguish members from nonmembers) *that operate in an organizational context* (which requires it to manage its interactions with other individuals and groups) *with a collective responsibility to perform one or more*

tasks, the outcome of which can be assessed (such as a product, service, or decision) (Hackman, 1987, pp. 322-323).

Hackman's group effectiveness model is a useful template for ECR processes because it focuses equal attention on three distinct elements: *personal needs and values* (the degree to which the negotiation experience contributes to the growth and personal well-being of each negotiator); *interpersonal relationships* (the degree to which the process of conducting and completing various negotiation tasks enhances member willingness to work together on subsequent tasks); and *timely and meaningful products* (the degree to which the negotiated agreement meets or exceeds the performance standards of those who must ultimately ratify, and later live with it).

Schwarz (1994:8) addresses the effectiveness question from the standpoint of the third party facilitator. He notes that effective facilitators faithfully adhere to a set of *core values* that encourage members of the group to take personal responsibility for generating the necessary information on which informed decisions can be based and later implemented:

> This book's approach to facilitation is based on three values: valid information, free and informed choice, and internal commitment to those choices.…*Valid information* means that people share all information relevant to an issue, using specific examples so that other people can determine independently whether the information is true. Valid information also means that people understand the information that is being shared with them.…*Free and informed choice* means that people can define their own objectives and the methods for achieving them and that their choices are based on valid information. When people make free choices, they are not coerced or manipulated.…*Internal commitment to the choice* means that people feel personally responsible for the decisions they make. Each person is committed to the decision because it is intrinsically compelling or satisfying, not because the person will be rewarded or penalized for making that decision.…The core values create a reinforcing cycle. People require valid information to make an informed choice. When people make free and informed choices, they become internally committed to the choices. When people are internally committed to the decisions, they take responsibility for seeing that the decisions are implemented effectively. Finally, people who value valid information continually seek new information to determine whether their decisions remain sound or should be changed.

When facilitators apply these core values in their third party involvement with likely negotiators, they become *conduits* for the sharing of valid information through which negotiators can make free and informed choices; *not* (as occurs within the typical approach to conflict analysis) the sole repositories in which such information is stored for later access. *Information must be shared, not hoarded, if people are expected to make informed decisions*.

For facilitators who incorporate core values into their ECR activities, data gathering is not done in order to determine what form the ensuing intervention is to take; *data gathering becomes the initial intervention* in a carefully designed process through which people's responses to interview questions begin propelling the negotiation process clear through implementation (Fiske, 1991).

A Typical Approach to Conflict Analysis

One of the major responsibilities of third parties in ECR processes is getting as complete an understanding of the current situation as possible—which involves identifying the various factors contributing to the conflict, as well as those potentially influencing its satisfactory outcome. This is no small feat given the multiplicity of parties, diversity of issues, intensity of emotions, and uncertainty of outcomes by which environmental conflicts are characterized. Third parties accomplish the task by gathering data from primary and secondary sources of information. The data is then assessed to design the most appropriate strategy for working with involved parties within the proposed negotiation process.

Third parties do not collect needed information haphazardly. They utilize a variety of techniques (particularly direct observation, review of *secondary source materials*, and personal interviews) to get as comprehensive an understanding as possible of the various factors that are seemingly conspiring to drive wedges between the parties. Secondary source materials allow third parties to obtain information unobtrusively, and help them identify and locate many of the potential skirmishes on the negotiation battlefield, while *direct observation* enables them to gain first-hand impressions of the people and the physical terrain's resources and/or values currently being contested (Moore, 1986, pp. 79-80; Carpenter and Kennedy, 1988, pp. 75-76).

It requires the *personal interviewing* of likely negotiators, however, to provide third parties with the detailed understanding of the various perspectives, issues and desired outcomes that must be grasped in order to prepare an appropriate intervention strategy in the event negotiations are to be pursued. When conducted skillfully, personal interviews afford participants the opportunity to educate the third party about the conflict as perceived from their unique vantage points. Given an appropriate mix of questions, respondents can provide as much detail as desired regarding the conflict and its potential resolution by relating *what is most important to them*. If interviewers can communicate a genuine interest in learning about each respondent's perspective via listening carefully to what is being said, then information thus derived should contain most (if not all) of the necessary ingredients for a satisfactory outcome (Moore, 1986, pp. 90-91; Carpenter and Kennedy, 1988, pp. 76, 212); the specific recipe, however, awaits the collective determination by negotiators.

Of equal importance to information obtained are *relationships* built between the third party and likely negotiators. By heeding the sage advice contained in the saying "you don't get a second chance to form a first impression," third parties begin building via the interview process personal relationships with others that are based on mutual respect and trust (Moore, 1986, pp. 86-87; Carpenter and Kennedy, 1988, p. 76).

Interviewers have several options available for eliciting information from respondents. Their questions can be either structured or unstructured, and can require either open-ended or closed responses. *Structured interviews* utilize a list of standardized questions that are asked of each respondent, while *unstructured interviews* follow no particular pattern and can differ greatly in focus from one respondent to another. The decision to use either closed or open-ended questions is mainly a matter of *control*: third parties limit the range of response by asking closed questions requiring specific information about specific items (for example: "Do you agree that negotiation holds the most promise for successfully resolving this conflict?"); while open-ended questions (for example: "Do you have any suggestions on how this conflict might be resolved?") allow the respondent to determine both the amount and level of detail of information to be shared (Moore, 1986, pp. 88-94; Carpenter and Kennedy, 1988, p. 82).

Another issue facing third parties concerns how interviews are to be conducted: in-person or via telephone? Most third parties prefer gathering information via *in-person interviews*, since they are then able to meet face-to-face with respondents and observe the "home turf" while simultaneously capturing the nonverbal (body language) cues that invariably accompany verbal responses (Carpenter and Kennedy, 1988, p. 84). *Telephone interviews*, however, do have their advantages—particularly for information gathering on regional conflicts where likely negotiators are spread over a broad geographical expanse (for example, the Pacific Northwest region). In these situations, telephone interviews can provide a cost-effective way for obtaining the necessary information.

Interviewers also need to decide *how interview responses are to be recorded*. Will responses be captured via written notes or through electronic means (such as tape recorders or data entry via computer)? Each alternative has its advocates. Those favoring the use of tape recorders state they are able to maintain eye contact and take note of non-verbal cues; those opposed say that such use inhibits response, since participants are unsure *how* their responses will be used and *whether* their responses may come back to haunt them via release of information that supposedly was to be held in confidence (Carpenter and Kennedy, 1988, p. 83). Skilled telephone interviewers can enter participant responses verbatim and almost simultaneously into the computer for immediate restating to the interviewee—for verification of completeness and accuracy.

Once the necessary information has been gathered via direct observation, review of secondary source materials and through personal interviews, the third party then needs to verify, integrate, and synthesize the data in order to interpret and understand what it all means. The way this is done varies considerably among third parties—from simple summaries to complex charts and matrices. Based upon interpretation of the data, the third party then designs an appropriate intervention strategy for use within the negotiation process (Moore, 1986, pp. 96-101; Carpenter and Kennedy, 1988, pp. 85-91).

The Developmental Approach to Diagnosis and Intervention

This section builds upon the work of Schwarz (1994) and Fiske (1991, 1994) to demonstrate how third party adherence to core values can positively influence ECR processes and outcomes. Before pursuing this topic, however, let us briefly pause and reflect on the range of data that might be gathered:

Public Participation

What is the public interest, and how does the proposed negotiation process serve it? How can negotiators inform and involve the general public (build broader participation) in the proposed negotiation process?

Individual Perceptions

People tend to make sense of life's many complexities through one of four frames. These patterns greatly influence subsequent behavior. Each of the frames seems particularly salient at certain points within an ECR process.

Environmental conflict resolution processes invariably get initiated through *structural* frameworks proposed by one or more levels of government. Conflict occurs when governmental efforts are no longer able to keep pace with community demands and/or satisfy public needs. Government then through its own initiative, or in response to public outcry suggests an alternative framework to address the conflict. Government will set the parameters for the alternative process, determine who needs to be involved, specify the task, indicate what process will be used to carry out the task, and then coordinate its completion.

From a *human resource* perspective, the resolution of an environmental conflict depends primarily on the extent to which negotiator needs get satisfied. Their needs are best understood and discussed within processes marked by negotiator openness in the sharing and discussion of individual concerns and suggestions. Such discussion is aided by the establishment of informal norms that create respectful and caring settings in which negotiators can surface concerns, explore alternative solutions, and collectively begin shaping satisfactory outcomes. The process clearly "drives" task attainment, because only when individual needs get sufficiently factored into proposed solutions will negotiators be committed enough to carry through on implementation.

For *political* framers, the resolution of environmental conflicts via negotiated processes is not the only game in town. While they would certainly be pleased should their view prevail and their desired outcomes get realized via such a process, there are always other arenas available through which to demonstrate their political prowess. Through such strategies and tactics as coalition building, the selective sharing of information, controlling the agenda and coercion, people holding this perspective build power bases from which to challenge the existing order and put it on the defensive. The political perspective sees conflict as the core catalyst of change: it unleashes people's creativity as they grapple with the inertia of the status quo, and it stimulates them to develop innovative approaches for situations in flux.

Unlike other lenses, the *symbolic* frame anticipates negotiation processes being filled with confusion, contradictions, chaos, and ambiguity due to questions that cannot be answered and problems that cannot be solved. The symbolic frame suggests that the most effective negotiators and facilitators are those who can convey meaning to others. Whether it be through stories, myths or metaphors, their message offers explanations for the past, comprehension of the present, and hope for the future.

Conceptual Frameworks

The *interest-based problem solving* orientation is interested in learning about the history of the conflict, why negotiators are concerned about the conflict, how negotiators might work together to address the conflict, what actions need to be taken by negotiators (and their constituents) to resolve the conflict, and by when such actions should be completed.

The *values-based problem solving* orientation strives to surface "what really is at stake" in the conflict by asking a series of questions that move negotiators from initially blaming others to ultimately taking personal responsibility for outcomes.

The *integrative* approach addresses specific factors influencing group effectiveness—including the personal needs and values of group members, the development and maintenance of interpersonal relationships, and the generation of timely and meaningful products. Its questions, accordingly, relate to each of these aspects.

Our examination of data gathering and analysis concludes with a discussion on how third parties' adherence to core values throughout intervention can positively influence negotiator interaction and stimulate greater commitment to implement any decision reached. This discussion encompasses the initial phase of an ECR process—from the moment the third party is contacted by the convener to the time actual negotiation occurs.

Intervening to Broaden Negotiator Understanding

In stark contrast to the typical approach used in conflict analysis whereby third parties are solely responsible for verifying information and interpreting data (Moore, 1986, pp. 100-101; Carpenter and Kennedy, 1988, p. 90), the developmental approach conscientiously seeks to foster joint responsibility between third parties and negotiators for the generation of valid information on which free and informed choices can be based (Schwarz, 1994, p. 8; Rothman, 1997, pp. 150-151). Developmental facilitators do this by *framing the data collection process as an educational opportunity* for participants to clearly communicate their perspectives regarding the conflict and its potential resolution. Implicit in this approach is the facilitators' belief that each individual possesses a "piece of the truth"; the challenge of negotiation is in piecing together a vision of a "collective truth" that negotiators and their respective groups can embrace and work together to realize.

Collaboration remains merely a concept, however, if no *trust* exists among individuals.

During their initial and subsequent interaction with likely negotiators, developmental facilitators embody two guiding principles in planting the seeds through which trust can germinate and flourish during the upcoming negotiation process: *building redundancy into communication linkages* so people are informed instead of surprised; and *honoring all commitments made* by following through on what facilitators say they will do. Developmental facilitators inherently realize that to gain the trust of others, they need to take the first steps themselves.

That first step is actually a series of sequential steps beginning when the facilitator is initially contacted by the convener about intervening in the conflict. Normally, *the request* comes via telephone or written solicitation, with the two parties then sharing sufficient information for determining if the facilitator's qualifications, skills, familiarity with the subject matter, proposed intervention strategy, cost effectiveness, and availability adequately address the convener's need for obtaining the services of a third party who can likely get the job done.

Assuming the facilitator is selected for the task, that individual will probably hold additional *meetings* with the convener to determine what actually needs to occur and by when. Based upon what has thus far been done by the convener (for example, the convener may have already identified and contacted the various stakeholder groups about participating in the proposed negotiations and obtained their commitment via designation of the individuals who will represent them), the facilitator will prepare a draft *contract* that clearly states how the proposed intervention will be done and what the specific responsibilities will be for both convener and facilitator.[8]

Once the convener and facilitator have agreed on the contract, the facilitator then prepares a draft *letter of introduction* for distribution by the convener. This letter formally introduces the facilitator to all stakeholder groups and their representatives while also placing the convener's "stamp of approval" clearly on the facilitator for upcoming tasks. The letter will include a statement to the effect that representatives will soon be contacted by the facilitator in order to determine a convenient time during which interviews will occur.

While the letter of introduction is being prepared on the convener's letterhead, signed by the convener and distributed to each stakeholder group, the facilitator is preparing a draft set of *interview questions for testing on the convener*. By being interviewed, the convener gains a first-hand impression of the facilitator's intervention approach while also assessing the extent to which proposed questions elicit the range and depth of response sought for issues of primary concern. Once the interview is completed, the facilitator and convener evaluate both the process and the substance in order to *determine the final set of questions* to be asked of all stakeholder representatives.

The facilitator will then prepare a letter for distribution to the address of each stakeholder representative listed on the roster previously provided by the convener. This *"facilitator's letter of introduction"* provides recipients with an overview of the process to

[8]Some excellent guidelines for contract development, as well as several sample agreements, are provided in Schwarz, 1994, pp. 261-281.

be followed, and emphasizes the facilitator's desire to provide stakeholder representatives with the opportunity to educate others (via participation in the proposed interview process) about the current situation and its potential resolution. The letter will also indicate that the facilitator or one of the facilitator's colleagues will soon be contacting the stakeholder representative to set up a convenient time and location for the interview. The letter will contain *several attachments:* a list of all questions to be asked during the interview and a copy of the contract agreed to by the facilitator and convener.

The facilitator will then *schedule the interviews*. Telephone interviews should not be scheduled any closer than 90 minutes apart, in order to provide the facilitator with sufficient time to conduct each interview and then enter responses onto the computer. The scheduling of in-person interviews is much more difficult, given the distances that facilitators must travel to get from one interview to the next.

Once the interviews are scheduled, *actual interviewing* can begin. This is the point where things start getting frustrating, since it is not at all uncommon for facilitators to have to reschedule up to one-third of their interviews with stakeholder representatives. Rescheduling can result from representative oversight (being unavailable at the agreed-upon time) or request (when unforeseen matters demand immediate attention during the agreed-upon interview time).

At the beginning of the interview, the facilitator provides a brief overview of the interview process and how the respondent's information will be treated (which was previously provided via the facilitator's letter and attachments). Each question is then covered, with the facilitator restating the answer provided by the stakeholder representative to be certain what was written is accurate. Once the interview is completed, the facilitator will indicate each of the subsequent steps and safeguards through which the respondent's information will be protected and remain confidential until such time as the respondent provides a written statement that such information can be shared with others.

What clearly distinguishes the developmental approach from other ECR approaches is the way in which interview responses are handled. *Data collection from individual stakeholder representatives does not cease upon interview completion*; rather, respondents are provided with as many opportunities as they choose for adding to (or deleting from) the information provided during that initial session. Such flexibility by the facilitator is absolutely essential if respondents are to fully control the contents of their stories through which others can be educated.

Developmental facilitators view their roles as *conduits for education and understanding* rather than as gate-keepers to previously collected information. No matter how many exchanges are necessary to assure that what was heard and written down by the facilitator is exactly what the stakeholder representative wishes to have disseminated, the facilitator's charge remains the same: to assure each stakeholder representative that what ultimately gets conveyed to others depends solely on that individual and not the

facilitator.[9] For some individuals, the multiple exchange of their information with facilitators offers the chance to reflect on how others might react to their responses. For certain individuals, the process may allow them to go beyond the initial "venting" and blaming of others to actually consider their own roles and responsibilities in bringing on, and perhaps resolving, the community conflict. Each person, however, benefits from being able to verify and modify the information that is to be shared with others. And *when each person benefits, the negotiation process as a whole benefits.*

Once the facilitator has obtained written permission from all the stakeholder representatives who elect to have their information shared with others, the *information is then compiled in a single document*. That document is organized so that responses to each question are unattributable (e.g., no names or affiliations are associated either directly or indirectly with any response) and randomly entered (e.g., to further protect respondent anonymity). The only place stakeholder representative names appear is on the cover sheet, where the names and affiliations of each person whose comments are included within the document are listed alphabetically so each recipient can better assess the extent to which those interviewed represent the full spectrum of affected interests and values. It should be noted that stakeholder representative *responses are not summarized or edited by the facilitator*. The individual respondent determines what will be shared with others.

Prior to information distribution, the facilitator will prepare a cover letter summarizing the just completed process. The facilitator will refer each recipient to earlier correspondence stating what was to be done and ask the reader to assess whether the facilitator has indeed followed through on earlier promises made. Accompanying the letter will be the document containing interview responses.

By this stage of the process a date for the initial negotiation session may have already been set. If such is the case, the facilitator will attempt to get the interview information into the hands of each stakeholder representative (and designated negotiator) *at least two weeks prior* to that session in order to provide sufficient time for review and assimilation of contents. If the initial negotiation session has been set, the facilitator will also include a *draft agenda* for that session. That agenda will be based upon the various questions asked during interviews and structured so each stakeholder group (if not each individual negotiator) has the opportunity to introduce themselves and share their perspectives. The facilitator will also provide a *draft of potential procedural norms for individual and group behavior* (e.g., ground rules) drawn specifically from respondent comments.

[9]It is not uncommon during interviews with 15-20 stakeholder representatives for the following to occur: 50 percent of the individuals will indicate, upon review of the facilitator's initial written notes of interview responses, that what was written down can be disseminated without further modification; a third of the individuals will make minor adjustments ("word smithing"); 10-15 percent will make substantive changes that provide additional details or examples to aid in others' understanding; and one individual will invariably decide (usually after four or more exchanges of written information with the facilitator) that the information is not to be shared with anyone.

Through their sequenced activities, facilitators enable stakeholder representatives to individually surface and share perspectives for later discussion and assessment within the negotiation process (Schwarz, 1994, p. 160). Depending upon the questions asked, the wealth of information thus generated can enable negotiators to more easily arrive at a collective definition of the problem as well as unleash their creativity in the shaping of potential outcomes acceptable to all. Through the data gathering and dissemination process outlined above, developmental facilitators consciously model behavior demonstrating how negotiators can generate valid information on which to make free and informed choices. Only the upcoming sessions, however, can determine whether choices ultimately made in the give-and-take atmosphere of negotiation are sufficient motivators for representatives and their groups taking responsibility for actual implementation.

Assessment of the Development Approach to Environmental Conflict Resolution: Panacea or Pipe Dream?

The previous section has attempted to paint a broad-brushed picture of how the developmental approach can be applied to ECR processes. As the reader may have already sensed, such an approach requires *ample time* and *careful attention to detail*—requirements the vast majority of third parties view as luxuries rather than basic necessities when intervening in contentious situations. With respect to time: it does indeed require a tremendous amount of time if third parties are to gather the quality of information that stakeholder representatives feel is needed for further discussion around the negotiation table. As a general rule of thumb, the third party has already invested approximately six hours per negotiator before the initial negotiation session has even begun. That figure increases by one to two hours per individual when data is gathered via face-to-face interviews with stakeholder representatives. By multiplying the average number of hours needed per individual by the average number of people interviewed (20), one quickly realizes that *such interventions require the full-time attention of at least one facilitator or mediator several months prior to initiation of formal negotiation* if each individual is to influence and be influenced by the information in which resolution resides.

One must also be cognizant of the financial costs associated with time. Whether provided by public sector employees located within universities or governmental agencies, or by private sector consultants specializing in multiparty facilitation or mediation: obtaining the services of a third party costs money. The question then becomes: who pays for such services, and in what form? Perhaps the convening entity has funds set aside specifically for the contracting of third parties; perhaps the university designates one of its employees to provide facilitation or mediation as an in-kind contribution to public policy education. When experienced private sector mediators are contracted to serve as third parties within ECR processes, it is not unusual for them to command upwards of $1,500 per day for services rendered. That amount may seem exorbitant until one realizes that a single negotiation session is a collective investment by stakeholder groups of at least $10,000 in representative salaries and missed opportunities

associated with participating at the negotiation table. If the third-party's involvement results in such sessions being viewed by negotiators and their stakeholder groups alike as an effective use of participants' time, the convening entity (or whoever is footing the bill) will very likely view its investment in third party services as money well spent.

There are additional benefits derived from the significant amount of time needed by developmental facilitators prior to commencement of actual negotiations. Through their "going slow to go fast" approach with each stakeholder representative (Rothman, 1997, p. 13), developmental facilitators are able to initiate and strengthen interpersonal relationships on which mutual trust is based. They also intervene in ways that enable negotiators to "take as much responsibility and ownership as possible for diagnosing and solving problems" (Schwarz, 1994, p. 254).

The second issue regards developmental facilitators' careful attention to details. This is illustrated through their conscious practice of redundant communication throughout the intervention process—from contract development and clarification of tasks with the convening entity; to the sharing of contract contents with stakeholder group representatives; to providing people with the necessary information on which to base upcoming activities (such as being interviewed, sharing of interview responses with others, proposed agendas, etc.)—in sum: *doing what they say they will do.* Through such action, developmental facilitators are able to reduce some of the ambiguity and uncertainty associated with environmental conflicts by serving as willing conduits through which negotiators can educate one another about the situation and its potential resolution.

The written contract serves two very important functions: it conveys to negotiators what they can expect from the developmental facilitator (thus enhancing process accountability); and, it clarifies the nature of ongoing relationships between the developmental facilitator and the convener—particularly when unforeseen difficulties arise (thus preventing the convener from unduly influencing the process). This is particularly important for developmental facilitators who intervene in contentious situations where the convener happens to be the facilitator's superior (Schwarz, 1994, pp. 289-293; Fiske, 1998, p. 1).

No matter how much time and careful attention, good faith and best of intentions: developmental facilitators cannot guarantee success or satisfactory outcome for any ECR process in which they intervene. Only negotiators and their stakeholder groups can do that. However, through their conscious integration and practice of the core values of valid information and free and informed choice when interacting with negotiators, developmental facilitators can help negotiators develop the necessary trust through which difficult issues can be constructively discussed—and build the necessary commitment among negotiators to collectively work towards their resolution.

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MORNING PLENARY

THURSDAY, MAY 18, 2000

Senior Mediators Reflect on Developments in the Field of Environmental Conflict Resolution

Thursday, May 18, 2000—Morning Plenary

Moderator

Kirk Emerson, U.S. Institute for Environmental Conflict Resolution, Tucson, AZ

Panelists

Howard Bellman, Madison, WI

Gail Bingham, Resolve, Inc., Washington, D.C.

Christopher Moore, CDR Associates, Boulder, CO

Lucy Moore, Lucy Moore Associates, Inc., Santa Fe, NM

Panel Abstract

Four distinguished mediators with long-standing experience in environmental conflict resolution (ECR) will discuss critical developments in the field and look ahead to the next 10–20 years. They will address a range of issues, many reflected in the conference themes and other panel presentations, including the following: What special process challenges do natural resource disputes pose to mediators? What stakeholder concerns must practitioners listen most carefully to? How are new technologies for data management, mapping, and decision support changing the field? What political and institutional developments are affecting ECR and environmental problem solving in general? Have our objectives or standards for successful outcomes changed over time? What roles can parties, including agency staff, play in the advancement of ECR? How should we address the need for greater diversity in the profession? What's happening to the language of ADR and consensus building? The panelists will address these and other questions, drawing on their case experiences over the past two decades to illustrate trends in the field and the challenges ahead.

Individual Papers

Senior Mediators Reflect
By Lucy Moore

Comments—Senior Mediator Panel
By Dr. Christopher Moore

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Senior Mediators Reflect

By Lucy Moore, Lucy Moore Associates, Inc., Santa Fe, NM

Stakeholder Concerns

Whatever I have learned about stakeholder concerns comes from hundreds of stakeholders I have worked with over the past two decades. And when I think back I hear them clamoring and shouting about our processes. They ask, depending on their era, "What is ADR?" "What is conflict resolution?" or as a woman asked over the phone years ago, "Do I bring my own pillow to meditation?" And they have reason to be confused about what we are offering. But, besides that, what keeps people away from the table? For me, this is a very big question. If people don't come to our party, we don't have a party. If our parties aren't inclusive they might as well not happen.

"Do I have to?" This is what I often hear from government agencies, at all levels, federal, state, local, and tribal. They see it as embarrassing, or a sign of weakness. They are afraid that dirty laundry might be aired and that they will have to do some internal housecleaning beforehand, and no one wants to do housecleaning. Even in cases where the agency knows it is the right thing to do—they have made the decision, they have hired a professional, they are in excellent hands—still I hear a lot of angst about their own participation, everything short of "Could you hold these sessions without us being there?" A facilitator or mediator can end up feeling like a dentist, saying "This will only hurt for a minute," or "Open wider," and then you submit the bill.

"Why should I?" Other stakeholders, environmentalists for instance, may see themselves as tough, successful in court, and already winning. Why should they enter into a forum for compromise? No matter how much we reassure them that the process is open, voluntary, and they are free to leave and do not have to reach agreement if they don't want to, still they are suspicious. As one participant said, "Why should I join a process and then be beaten down by consensus?" We may see our processes as harmless and empowering of all, but to some they are insidious and can exert great pressure to eventually cave in, go along with the crowd, not wreck a potential agreement.

"Will it be worth it?" Tribal representatives, among others, are incredibly overworked, stressed out, and responsible for wearing many hats. Our processes can look like some kind of irrelevant luxury for people who have nothing better to do. For these people, there is also something very pressing that should be attended to immediately, maybe even something with big cultural or religious impacts. So, what would make it worth their while to participate? Compensation could help, or logistical accommodations of place or time of meeting. Having important people there, the decision makers, the real leadership, will also make a difference to people who are having to weigh every minute. And, of course, understanding the process and believing in its value will be the most important question.

"Will I be sorry I did it?" Tribes, environmentalists and community groups often fear that they will lose something by participating. Tribal sovereignty might be compromised by participating in a process that then speaks on behalf of the tribe. A group may fear being co-opted if they agree to sit at the table. I have heard suspicion from groups that if they sign the attendance sheet the agency or meeting sponsor will claim in the end the support of that entity. "I don't want them to use my name and pretend that I am backing them on some decision I don't even want them to make."

"Does it have to be so white?" I believe that ADR processes are a product of mainstream Anglo America, and as such they reflect those values, styles, and assumptions. Other cultures within this country do not always share these values, styles and assumptions, and our processes can be mighty uncomfortable for those participants. Points of discomfort I have noticed include our mania for writing things down, our obsession with the clock, and the overly secular and neutral nature of our processes, which lack any spiritual content.

"Is this a government plot?" A corollary discomfort stems from the fact that we practitioners can appear to be cloaked in government clothing. We may be paid by an agency, and in spite of repeated disclaimers about our objectivity and the fairness of our processes, we will be associated with the government, for better and worse. And in the Southwest, right now, it is for the worse. Many of our potential parties do not trust the government for a variety of reasons, including broken treaties, land management practices, prescribed burns, endangered species...and now they are being visited by the latest in this long line of colonizing tactics—ADR.

So, what can we do as conveners and facilitators of these processes to insure the greatest number of guests at our parties? We can adjust our parties to be more accommodating, in terms of logistics, spirit, purpose, and style. We can get the leadership, the decision makers there. We can make sure that the processes belong to the participants, that they were part of their creation, and that their purpose and operation are clear. We can allow scrutiny of the process as we move along, always being ready to adjust if necessary. We can adapt to certain cultural needs. We can mentor new professionals in the field, or work with community members, staff, whoever is interested in what we do, how we do it, and why.

And, finally, some research that I have been doing over the past many years has revealed to me...

... the Top Ten Reasons Why Stakeholders Don't Want to Participate in our Processes

1. Fear of the sticky colored dots.
2. I might get a new age mediator from Santa Fe.
3. Everyone will probably be white.
4. I'm tired of listening with respect.
5. I don't want to be thanked for sharing.

6. A third party neutral doesn't sound like a lot of fun.
7. I may lose something important, like my sense of humor.
8. I may not get everything I want.
9. It's hard to be a martyr when everyone is trying to satisfy my needs.
10. People will think I'm a wimp.

Comments—Senior Mediator Panel

By Dr. Christopher Moore, Managing Partner, CDR Associates, Boulder, Colorado

What changes in the practice of environmental dispute resolution have you seen over the course of your work in this field?

While the field of environmental conflict dispute resolution (EDR) existed in the early 1970s, only a small group of individual practitioners and firms were engaged in the venture. When the first national environmental dispute resolution conference was held in Florissant, Colorado, in the early 1970s, approximately 20 people attended; and these were almost everyone in the field. This is a far cry from the number of people who are attending the Institute's conference today, or those who participate in the environmental sector meetings of the Society of Professionals in Dispute Resolution.

In the last 20 years, the field and practice has changed in a number of ways including: arenas of practice and issues being addressed, the people who are initiating and using the services, the number and diversity of practitioners, and the practice dilemmas or problems that are emerging.

Issues Being Addressed and Arenas of Practice

In the early days of the field, interventions were few and far between and generally limited to a narrow range of problems. Practitioners, as they do today, engaged in some research to define what we did, trained potential clients about how EDR could be useful, and intervened occasionally in disputes at mostly the federal, and occasionally at the local, level. A few federal agencies—such as the U.S. Environmental Protection Agency, Forest Service, Park Service, and Bureau of Land Management—were interested in EDR. They sponsored training projects, but interventions were limited. A few local governments, at the county or municipal levels, utilized EDR, but state governments were notably absent from the process.

Federal agency involvement in the field through sponsorship of interventions and promotion of collaborative processes, played a major role in the development of EDR. Federal initiatives, which provided forums and enabled practitioners to develop successful models, promoted expansion of EDR applications to all levels of problems—federal state, county, and local/municipal.

The National Institute of Dispute Resolution, and the Hewlett and Ford Foundations, also helped develop the field and diverse applications as they supported both private practitioners and organizations, and emerging state offices of dispute resolution.

Issues being addressed have expanded to include planning and land management, habitat and species protection, air quality issues, diverse water problems, and Superfund cleanup issues. As many issues tend to repeat themselves, albeit in different geographic areas, and practitioners have been able to intervene in similar disputes, there has been the beginning of specialization in the field.

In addition to growth in domestic arenas, there has been tremendous interest in EDR and its diverse applications outside of North America. Western and Eastern Europe, Australia, New Zealand, and South Africa all have growing numbers of EDR practitioners and projects. In the developing world there have been significant initiatives by both governmental agencies and non-governmental organizations initiatives in Asia and Latin America. Promoters of EDR processes, albeit on modest levels, have been the U.S. Agency for International Development (the Fostering Resolution of Water Disputes Project), GTZ (the German technical assistance agency), the World Bank, and a number of foundations (Ford, William and Flora Hewlett, and Charles Stewart Mott).

As the field has grown, there has been willingness on the part of users and practitioners to apply procedures and tackle increasingly difficult and value-laden cases, such as those over protection of threatened or endangered species.

Initiators and Users

Perhaps one of the most significant changes in the field has been the increase of internal agency champions for EDR processes and applications. There are now multiple people and programs acting as catalysts for the use of EDR in governmental agencies at all levels. This has been motivated both by federal legislation or executive orders, and by demonstrated effectiveness of procedures.

At the state and local levels, directors of municipal and county planning departments, officials in state departments of natural resources, environment, and health are now willing to consider or implement EDR procedures.

In addition to government support, business and industry are now on the EDR bandwagon. Numerous companies have initiated EDR processes to facilitate both internal decision making and to resolve differences with regulators and public interest groups. Engagement has occurred over the establishment of policies (policy dialogues), new regulations (regulatory negotiations “reg-negs”), and resolution of site specific issues.

There have also been some significant changes in the environmental community regarding participation in EDR processes. In the early days, litigation was seen as the major way to satisfy interests, influence decision making, and establish precedents. As

time has passed, and a body of law has been established that defines parameters and procedures for environmental decision making, a number of environmentalists have engaged in collaborative processes, and have been satisfied with the results. While skepticism regarding participation and potential co-optation is still there, a number of leading individuals and groups have engaged in EDR processes, learned to use negotiation effectively, and have seen value in exploring collaboration. A number of environmental advocates have noted that they often get better information, have greater opportunities for influence on ultimate decisions, and like the customized results that result from EDR processes.

Processes and Practice

There have been a number of changes in the last 20 years concerning the ways that EDR is practiced. Some of these include:

Work with larger groups—Practitioners have developed effective procedures for working with large numbers of parties. This change has increased opportunities for participation and enhanced information and input available for making wise and broadly supported decisions. It is not unusual for practitioners to work with groups of 50 participants, and it is not unheard of to have groups of over 100.

Link between public involvement and EDR—In the early days of the field, dispute resolution activities were very limited, and often were separate from public involvement activities, procedures for gathering input or educating the public, but not involving them directly in decision making. Today, collaborative decision-making/dispute resolution and public involvement have been linked so that input is enhanced, and parties are often directly involved in formulating decisions.

Technology and process links—As problems and disputes have become more complex and technical, practitioners with general substantive environmental knowledge have needed to find ways to enhance their technical expertise and bring additional skills to the table. One way that this has occurred has been the development of partnerships between EDR “process” practitioners and consulting firms with scientific expertise. Practitioners and clients who recognize the need for additional substantive or scientific input have fostered this approach.

Diverse processes of mediation and dispute resolution—As the field has grown, there has been both recognition of, and developments in, how mediation is practiced. While process mediation, procedural assistance in promoting more effective problem solving, or negotiation processes, have probably continued to be the norm, evaluative mediation—where the intermediary provides more substantive input or advice to parties, and transformative mediation, where the intermediary works more intensively on the relationship components of a dispute—have become much more widely used.

Practitioners

Significant changes in practitioners have also occurred. Some of these include:

More providers who are geographically dispersed—Rather than being merely an East Coast, Rocky Mountain, or West Coast phenomenon, EDR and providers are now spread across the U.S. It is now much easier to find a number of experienced practitioners who are able to provide service closer to the client's "home."

Diverse levels of experience, and expertise, and price—As practitioners have gained more experience and deepened their practice, both in the areas of process and substantive areas, users have a broader range of expertise to choose from.

Internal and external neutrals—There has been a growing trend by government agencies to develop cadres of internal neutrals who can perform some kinds of EDR work, including: situation assessments, convening, process strategy design, dispute systems design, and facilitation where the agency is not seen as a primary party or advocate in the dispute.

Legal community's role—The legal community has shifted from either being outside EDR procedures or opposed to them, to a position of embracing many EDR processes. Many lawyers in private or governmental practice are engaging neutrals or performing these roles themselves.

Link of process with expertise, and the development of specialization—As practitioners have gained more experience and knowledge in specific substantive areas, they have begun to offer more substantive assistance to parties. This trend has also led to the development of specialization, such as the facilitation of Superfund related issues.

Development of minimal standards, best practices, codes of ethics, and the EDR roster—As the number of practitioners has grown, efforts have been made by the profession and concerned users to develop standards of performance and means to link clients with qualified providers. Efforts of the Society of Professionals in Dispute Resolution, the U.S. EPA, and the Institute of Environmental Conflict Resolution have been especially instrumental in this area.

Dilemmas and Problems

More choice for users—As the number of practitioners has grown, users are faced with the dilemma of how to find the right intermediary with the necessary experience and qualifications. The Institute's roster, and future refinements, will help in this area.

More competition—As the number of practitioners has grown, there has been growing competition for work. This has resulted in tensions among providers, and probably a decline in collaboration.

Significant cost differences for services—There are now significant differences between what practitioners charge for services. Clients are often not sure how to differentiate between providers or what services they can expect. Generally, but not always, the most experienced providers charge higher rates. However, intermediaries with legal training often charge higher rates than non-legal providers, even when the former have less process or substantive experience.

A distressing phenomena that seems to be on the rise, has occurred when users are pressured to use EDR by superiors, select providers solely on price, and fail to adequately consider the experience or expertise necessary to do the required work. This approach often results in securing practitioners who lack the substantive and procedural expertise to do the job, less than satisfactory performance, and dissatisfied consumers. Providers need to have an opportunity to present their experience, expertise, and approach to the scope of work. Users need to assess the level of experience and skills needed to assist in the resolution of a dispute, carefully evaluate their willingness to pay to secure them, and not automatically go with the lowest cost provider.

Continuing structural barriers to public interest group participation in EDR processes—Public interest groups are still at a disadvantage when asked to engage in collaborative processes that are labor and resource intensive. For many, it is easier and less costly, at least in the short run, to litigate rather than negotiate. A number of approaches have been developed to deal with these problems, including outright grants to public interest groups to participate in negotiations, or other funding mechanisms, such as pools of funds managed by government agencies or intermediaries. Significant work needs to be done in this area to assure ongoing participation from public interest groups and to help level the playing field.

Fear of loss of control or seduction—Government personnel continue to be somewhat wary of participation in collaborative dispute resolution processes, because they fear that they may be loosing control or giving up mandated authority to make decisions. This may be the cause of a decline over the past few years in “reg-negs.” While neither of these concerns are usually the case, agreement cannot be reached unless an agency concurs, and ongoing resistance to EDR from these sources will be present in at least the near future.

While governmental personnel fear loosing control, many public interest group advocates fear being lulled into agreement by contact with other parties. They are afraid that they may be seduced or forced to sacrifice their principles or interests, and may loose the support of their constituents. One of the major challenges of intermediaries is and will be to find ways that public interest groups can participate without having to sacrifice core principles, and to protect representatives so that they are seen as heroes and not traitors.

Substance/process debate—There is a continuing debate regarding how much substantive expertise an intermediary needs to have to be of assistance to parties in a dispute. To some extent, this concern will be addressed as practitioners gain more and

repetitive experience on similar issues. In the meantime, there are diverse ways to get substantive expertise to the table, including information directly from parties and technical consultants who are hired by and accountable to all parties.

The above are some of the changes that I have seen in the field over the past 20+ years. For the most part, I would say they are changes for the better, and I believe that they have contributed to the development of a more civil society and one that develops better and wiser solutions to some very knotty problems.

SESSION IV

THURSDAY, MAY 18, 2000
10:15–11:45 A.M.

Mitigating Conflict to Native American Land Use

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Deborah Medders, Mediation, Vineyard Haven, MA

Panelists

Fatima Dames, New England Coalition for Justice

Timothy Love, New England Coalition for Justice

Robert F. Mills, Mashpee Wampanoag Indian Tribe

Panel Abstract

American Indian tribes, largely quiescent during the period of assimilation [1870-1970] in their control of land use, have become increasingly vehement in their concerns about government, state, municipal, and private treatment—or ill treatment—of *Mother Earth*. Conversely these parties have become increasingly concerned with the American Indian tribes' sophistication in developing strategies to protect and enhance their interest in land use and development. An example is the appointment of tribal members as historic preservation officers by the National Park Service. Consultation with American Indian tribes is required of the proponent of any federally funded project with respect to cultural/archeological resources in the geographic area of the tribes historic influence. Ultimately, that includes the entire U.S. Without consensus, the conflicts of interest could be disastrous. A discussion of case studies involving northeastern tribes will show how the participants performed to a higher standard as a result of the consensus building process.

Individual Papers

Mitigating Conflict to Native American Land Use
By Deborah Medders

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Mitigating Conflict to Native American Land Use

By Deborah Medders, Mediation, Vineyard Haven, MA

We will begin by siting five case studies involving tribal government-to-government land use matters illustrating the historical, political, cross-jurisdictional areas—with particular emphasis on processes that engage consensus building and other alternative dispute methods. We will then outline for you in general terminology some those areas that begin to define—or can dictate—the relational process between an American Indian tribal government and other governmental entities. Specifically, American Indian tribes that are federally acknowledged tribes and other governmental entities being municipal, county, state, and federal.

Case Studies

Herring Creek / 1990-1998: In the early '90s predation became a problem. Due to shoaling at the mouth of the creek, particularly after Hurricane Bob, herring were being consumed by striped bass and couldn't make it upstream to spawn. Corrective action to be taken involved the need to dredge, stabilize creek banks causing siltation, and construct jetties.

History: Tribal Elders historically maintained the creek dredging by land to insure the herring could make it upstream to spawn. Elders made jewelry out of the herring scales, and the fish was smoked and salted, used for bait, its roe was eaten, etc.

In the 1800s the tribe was given (granted) by the Commonwealth of Massachusetts the perpetual right to fish and maintain the Herring Creek for one-rod on either side of the creek; a right restated in the tribe's recognition act by Congress in 1987.

Principle involved: The execution of the traditional grant by the Commonwealth and Congress to the tribe to maintain the creek versus the opposition by the private landowners who abut the site.

Parties/jurisdictional and regulatory authority
- Wampanoag Tribe of Gay Head (Aquinnah)
- MA Division of Marine Fisheries
- Department of Environmental Protection
- Coastal Zone Management
- U.S. Army Corp of Engineers

Process: Following Hurricane Bob, the federal disaster relief board declared the creek passage eligible for dredging and stabilization. The tribe followed procedures, rather than relying on its sovereignty, to make application through all the standard regulatory agencies—federal, state and local—for permitting. Despite a clear need, the abutters contested the regulatory procedure arguing against, basically, commercial fisheries. Continuing to follow procedures, the tribe brought the question to the state court who ultimately upheld the tribe's position.

Shellfish Propagation Plan / February, 2000: The design and construction of a shellfish hatchery for the propagation of clams, oysters, and scallops, it seeks to perform monitoring of water, i.e., taking plankton samples, testing salinity and water temperatures, measuring oyster larvae, establishing pens for the growth of shellfish moored in the pond, improving the bottom of the pond, and trapping and removing predator green crabs.

Principles involved: The tribe was venturing into an area historically under the exclusive jurisdiction of the town.

Overlay of jurisdiction, laws and regulations
- Municipal law

Parties
- Wampanoag Tribe of Gay Head (Aquinnah)
- Town of Gay Head

Process: The adoption of a cooperative agreement between the tribe and the town Board of Selectmen. The intergovernmental agreement document confirmed the authority of the town and the town shellfish warden, and deputized tribal employees of the Tribal Natural Resource Program as deputy shellfish constables.

Tribal Housing Authority comprehensive permitting process / 1994: The design and construction of tribal residential housing on tribal trust lands for the first time in its history.

Parties/jurisdictional and regulatory authorities
- Wampanoag Tribe of Gay Head (Aquinnah)—the governing body of the Tribe
- Aquinnah Wampanoag Tribal Housing Authority—tribal housing authority as recognized by the U.S. Dept. of Housing and Urban Development
- Town of Gay Head
- Town of Gay Head Zoning Board of Appeals [ZBA]
- Town of Gay Head Conservation Commission—jurisdiction over wetlands (a large portion of tribal land is actually wetlands)
- Martha's Vineyard Commission—state legislated regulatory authority for land use and planning for the county of Dukes County

Process: The housing authority used a comprehensive permit process, available for affordable housing efforts, before the Town ZBA. This removed the housing authority from jurisdiction and control by some town boards, limiting the town to use of only the ZBA. The Martha's Vineyard Commission (MVC) was a separate approval process before any town permit could be sought, although there was question of its jurisdiction over tribal lands.

Nonetheless, the tribal housing authority agreed to this two-tier permitting process, MVC and ZBA, whether legally required or not—with the desire to obtain town approval

by cooperation as an alternative to the more common practice of judicial appeal and the resulting costs and years of delay. The cooperative approach worked with the MVC and upon approval by the MV Commission, the application was returned to the Town ZBA. However, that town board denied the tribal authority's permit. It cited a fear of increased school enrollment (projected at about 35 percent). This was not actually a valid reason for denial under the state comprehensive permit law (nicknamed, incidentally, the "anti-snob zoning act"). The Authority appealed to the state's Housing Appeal Committee in a process expected to take at least a year.

The town Board of Selectmen had been supportive of the tribal efforts. Also wishing to avoid costly and divisive litigation, they removed two members of the three member ZBA. Those members, in turn, sued the town and Board of Selectmen questioning their authority to do so. Although a state trial judge preliminarily indicated he thought the selectmen were correct, that litigation could last for a number of years.

After a number of months of this preliminary, judicial battling, and with the threat of HUD money being withdrawn, counsel for the Authority informally contacted the state's Office of Dispute Resolution. The assistant director undertook personal contact with all parties; the selectmen and the ZBA members agreed to negotiation. The Authority did not agree to participate, believing it had been wronged and shouldn't have to negotiate. Nonetheless, the state official continued informal, separate discussions with representatives of all three parties for almost five days. At the end of that week, the ZBA members dismissed their suit and the town granted the comprehensive permit, ending in five days a dispute that could easily have lasted years.

Tribe/Town Agreement / 1995: An intergovernmental agreement regarding the provision of public safety services—law enforcement, fire, and medical emergency services—on tribal lands by the town.

History: Prior to 1987, the tribe was acknowledged by the state as an Indian tribe but not by the federal government. In 1987 federal acknowledgment was recorded; lands were restored to the tribe and ultimately put in trust with the U.S. of America as trustee.

Principles involved: Authority of the town to enter tribal lands for purpose of providing police, fire, safety, health and welfare issues. The tribe needed the services and had not established its own traditional municipal types of agencies or departments; it sought to have them provided by the town (practicality of tribe having its own assertion of sovereignty).

Overlay of jurisdictions, laws and regulations
- Federal Lands Settlement Claims Act
- Tribal laws and ordinances

Process: The process itself was a demonstration of sovereignty with a government-to-government relationship, and resulted in promulgating the first intergovernmental agreement between to two governments.

A series of meetings was established to help the municipal government understand what the Tribe wanted to achieve and then to craft an intergovernmental document. The document outlined these public safety services—police, fire and medical personnel, and resources in the event of disaster, disorder, fire or other emergencies arising on tribal lands—and the document also defined the roles and responsibilities of the two governments and their agents.

Further, it was recognized that as the tribal government's use of the lands increased, such as the building of residential housing for tribal members, so would the public safety service needs. The agreement document was formatted in two parts:

1. The agreement which speaks to the authorization and services, and
2. An operational plan which serves as the component of the overall document that changes to meet the ongoing changes in needs, such as population increase.

Private Land/Preservation / 2000: Construction of a private residential dwelling in an area deemed to be historically significant by the Massachusetts Historical Commission where the significance relates to tribal culture.

Principle involved: Protection of historic tribal resources on private land.

Overlay of jurisdictions, laws, regulations

- State Historic Preservation Act
- Tribal sovereignty over Indian Country [historic boundaries of the tribe]
- National Historical Preservation Act

Process: The areas sought to be developed were identified as an area of potentially historic significance by both the tribe and the state. The site underwent assessment at different regulatory levels, along with the development of topographic and building plans.

On-site meetings occurred with the tribal historic preservation officers and private landowners. The State Historic Preservation officer was involved where nontribal lands were investigated.

A Memorandum of Understanding and Preservation Restriction was agreed to with the private landowners, Massachusetts Department of Environmental Protection, State Historic Preservation officer, and the tribe. This memorandum document was recorded at the county office of the Registry of Deeds, protecting the cultural resources of the land in perpetuity. The document also defines access issues for ceremonial purposes native to landowners, etc.

Following is an list of general areas that will define the relationship prior to communication with the parties/stakeholders.

1. A tribe's land settlement claims act with Congress, and other documents with the federal government, by which the tribe and the U.S. government have established tribal status and inter-governmental jurisdiction.
2. The geographical boundaries of tribal-controlled land, whether in "on or near reservation" status or owned in a proprietary sense (trust lands vs. fee lands), or its historical boundaries.
3. Sovereign rights exercised by the tribe as to the local and state government. (In the past two decades, we are finding individual states also standing on sovereignty, or states rights, as they speak to the federal government, e.g., over administering appropriations.)
4. Courts: Are there tribal, state, or other adjudicative forum such as a Council of Elders which share jurisdiction?
5. Enforcement: Interdepartmental cooperation between tribal police, natural resource rangers, historic preservation officers, or other public service agencies.
6. Custom and tradition: Those inherent practices that influence positions being taken.

Lessons Learned from the Glen Canyon Dam Adaptive Management Program

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Barry Gold, Grand Canyon Monitoring and Research Center, Flagstaff, AZ

Panelists

Steve Gloss, Institute and School of Environment and Natural Resources, University of Wyoming

Charles G. Groat, U.S. Geological Survey

Randall Peterson, Adaptive Management and Environmental Resources Division of the Upper Colorado Region, Bureau of Reclamation

Panel Abstract

The panel will present lessons learned from three years of implementation of adaptive management. These include the importance of developing protocols for the implementation of adaptive management; the concepts of experimentation, uncertainty, and potential conflicts with existing law and management culture; the need to establish a vision for the program; a process for developing management objectives and information needs; a discussion of organizational issues; the role of a single science center that will be used by all stakeholders; approaches to maintaining the objectivity and credibility of the science being performed; and how one brings this scientific information back to the management/decision making process.

Individual Papers

The Glen Canyon Dam Adaptive Management Program: Lessons Learned
By Dr. Barry D. Gold

Lessons Learned from the Glen Canyon Adaptive Management Experience: Views from Downstream and the Rim
By Steven P. Gloss

Role of Science in Management and Decision Making Affecting Natural Systems
By Dr. Charles Groat

The Glen Canyon Dam Adaptive Management Program: Current Challenges
By Randall Peterson

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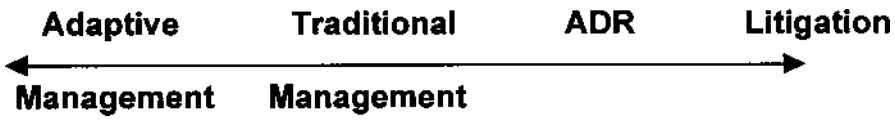
The Glen Canyon Dam Adaptive Management Program: Lessons Learned

By Dr. Barry D. Gold, Chief, GCMRC



Introduction

- March 1996—Secretary Babbitt opened the jet tubes on Glen Canyon Dam releasing a "manmade" flood and initiating the Glen Canyon Dam Adaptive Management Program (AMP).
- Babbitt's quick turn of the valves capped six years of effort and began a bold experiment in natural resources management.

Traditional adaptive management (AM)

- AM initially intended to better incorporate scientific understanding into management actions.
- Embraces uncertainty and recognizes that the best management action may be currently unknown.
- Treats management actions as experiments designed to test clearly formulated hypotheses.
- Future management actions are based on the knowledge gained from "large-scale" experiments.

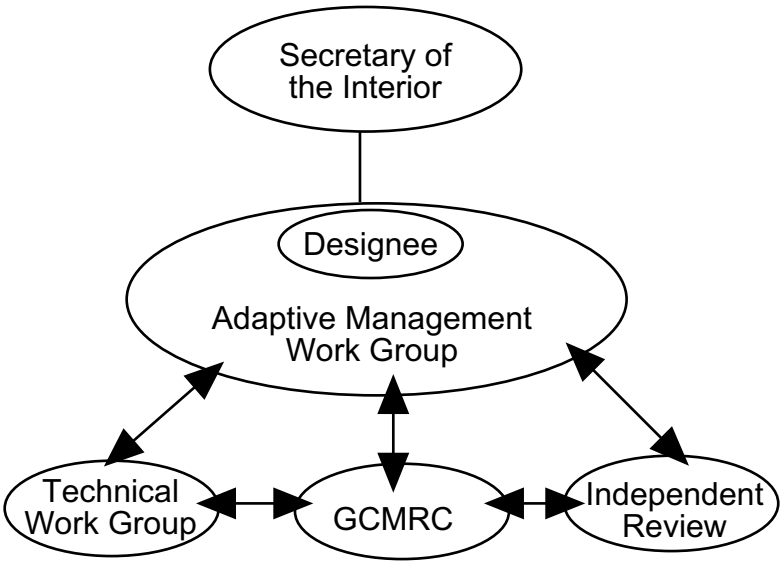
Contemporary adaptive management

- Acknowledges the importance of a *consultative process* that brings all stakeholders to the table.
- Embraces a 21st century paradigm of natural resource agencies "governing with people" as compared to "ruling over people."
- Places a premium on the stakeholders developing a common vision.
- Requires clarification of stakeholder values and legal and policy boundaries.

Elements of the Glen Canyon Dam Adaptive Management Program

- Legal basis in the Grand Canyon Protection Act, Operations of Glen Canyon Dam EIS, and Record-of-Decision.
- Features governing partnership with stakeholders.
  —FACA committee for recommending actions
  —Begins with stakeholder MOs and Ins
- Managers establish "vision" and goals within framework of existing law.
- Treats management actions as experiments
  —Outcomes cannot be accurately predicted
  —Monitoring to see if ecosystem responds as predicted

- Future management actions based on new knowledge
- Uses a conceptual model to:
  —Organize our understanding and test assumptions
  —Screen management alternatives
  —Design monitoring and research programs
- Ability and willingness to embrace risk
  —Risks associated with “management actions / experiments” are balanced against need for resource protection
- Relies on information from a single science center (GCMRC) for decision making.
- Independent external review and competitive processes ensure credibility and objectivity.



GCD adaptive management—secretary’s designee
- A senior DOI official who serves as the Secretary’s principal contact for the AMP.
- Responsible for ensuring that DOI complies with the GCPA, EIS, and the ROD.
- Reviews, modifies, accepts, or remands recommendations from the AMWG about changes in dam operations and other management actions.

GCD adaptive management—AMWG
- Chartered under FACA.
- Consists of federal and state resource managers, Native American tribes, power, environmental and recreation interests.
- Chaired by the Secretary’s designee.
- Develops, evaluates and recommends alternative dam operations to the Secretary.
- Does not displace federal agency legal authority and responsibility to manage GCD

GCD adaptive management—TWG
- Technical representatives appointed by the AMWG.
- Translates AMWG policy and goals into management objectives and information needs.

- Provides questions that serve as the basis for long-term monitoring and research activities.
- Interprets research results for their AMWG member.
- Prepares reports as required for the AMWG

GCD adaptive management—GCMRC
- Responsible for all AM science activities.
- Manages and maintains all data.
- Administers scientific activities primarily through a competitive RFP process.
- Coordinates the review of scientific programs and reports.
- Prepares and forwards recommendations and annual reports to the AMWG and the secretary.

GCD adaptive management—IRPs
- Composed of independent external peer-review panels, an SAB, and other outside bodies (i.e., NRC).
- Annual review of scientific activities.
- Technical advice to GCMRC and the AMWG.
- A five-year review of GCMRC and the AMP.
- Play a critical balancing role to ensure the overall scientific credibility of GCMRC activities.

The Colorado as a wild river
- Predam flows of 1,000-100,000 cfs.
- Predam water temperatures from 0°-80°F.
- Sediment rich, regular scouring, changing geomorphology, and riparian habitat.
- Evolutionary history of annual disturbance.
- Relatively low productivity and species diversity.

The Colorado as a regulated river
- ROD flows of 5,000-25,000 cfs.
- Flood disturbance regime significantly reduced.
- Flows decoupled from natural seasonality, daily / hourly fluctuations increased.
- Year-round clear, cold (47°F) releases
- Only one flow release since 1963 which approached pre-dam levels (no sediment).
- 1976 sand bar and channel-bed erosion reported.
- Increased 1° productivity—decreased native fish.
- Increased biodiversity—decreased native biodiversity.
- Blue-ribbon trout fishery established in tailwater
- Recreational river running increased
- Water and power benefits:
  —Supplies water to lower basin during droughts
  —1,300 MW of generating capacity
  —Extends utility of downstream reservoirs
  —Recreational opportunities on Lake Powell

Accomplishments
- Vision and revised MOs and INs.
- 1996 beach/habitat-building flow.
- 1997 habitat maintenance flow.
- Development of long-term monitoring.
- 2000 low steady summer flow test.
- Hydrologic triggering criteria, resource evaluation criteria, conceptual model, state of the Canyon resources report.

The 1996 BHB—some objectives
- Mimic elements of the natural hydrograph
- Rebuild high-elevation sandbars and camping beaches
- Restore backwater channels
- Flush nonnative fishes
- Provide water to old high-water-zone veg.
- Protect cultural resources
- Do no harm

The 1996 BHB—results
- Beaches were restored and sediment was deposited to protect cultural resources.
- Negative effects were minimized.
- Politicians, managers, scientists, and the public celebrated the success.
- Created a spirit of cooperation and problem solving.
- Adaptive management as a process was embraced.

The 1997 habitat maintenance flow—objectives
- Paria River sediment inputs (1:10 year event) were triggered.
- Test of 31,000 cfs release for conserving fine sediment inputs.
- Took two months instead of two years to plan.
- Evaluate sediment conservation benefits of following tributary inputs by nonspill high flows from GCD during summer/fall.

The 1997 habitat maintenance flow—results
- Sand bars above 20,000 cfs were moderately aggraded.
- Sediment transport data showed evidence of supply-limited conditions similar to those documented in 1996 BHBF test.
- Benefits to increased eddy storage of sand could not be determined owing to restrictions on use of motorized boats in fall season needed for bathymetric measurements.

(Low) Steady summer flows WY2000
- Test of RPA contained in 1994 biological opinion.
- Simulate the seasonal pattern of the natural hydrograph to benefit native fish.
- Provide stabilized low-velocity near shore habitats.
- Also, an excellent opportunity to answer questions about sediment budget and storage.

Lessons learned

- Adaptive management can be frustrating!!!
- Public participation is fundamental.
- Stakeholders must play a key role.
- Values (MOs and INs) must be clear.
- Management should be separate from science.
- Utilize external review and competitive processes to ensure objectivity of science.
- Stakeholders free to interpret the meaning of common data sets.
- Communicate, communicate, communicate to keep science relevant to managers.
- Use a model as a common framework for understanding, not predicting.
- Celebrate low hanging fruit.
- Acknowledge uncertainty and take risks.

White-water ahead

- Fragility surrounding cooperative spirit.
- Flexibility of AM colliding with rigidity of ESA and the “law of the river.”
- Proposed management actions may be insufficient to achieve goals.
- Concerns over funding and long-term costs.
- Common definition of “experimentation.”
- Maintaining trust and shared “vision.”

Conclusion

> The [Glen Canyon Dam] Adaptive Management Program is a science policy experiment of local, regional, national, and international importance.
>
> —NRC, 1999

Lessons Learned from the Glen Canyon Adaptive Management Experience: Views from Downstream and the Rim

By Steven P. Gloss, Institute and School of Environment and Natural Resources, University of Wyoming[1]

Introduction

The lessons learned during the brief history of the Glen Canyon Adaptive Management Program and the Grand Canyon Monitoring and Research Center (GCMRC) are myriad, some providing cause for optimism and some causing concern: not all can be addressed herein. The views presented in the following paper are a combination of those contained in the National Research Council's recent report on the GCMRC (NAS, 1999) and independent perspectives regarding the adaptive management program in the Grand Canyon, the latter based upon study of the ecosystem management process in other large riverine ecosystems.

Recently a workshop was held in St. Paul, Minnesota, in which the author participated. The workshop was entitled "Taking Stock: A Reflective Dialogue among Practitioners on the Challenges of Implementing Adaptive Management of Large River Systems." The group included two members involved in the Adaptive Management Work Group (AMWG), or its technical activities, among approximately 25 in attendance. While the theories and concepts of adaptive management have become part of the lexicon of modern resource management, experiments in implementing adaptive management in large regional systems are still fairly young. There is a clear need to leverage such experience by creating additional opportunities and alternatives to share the growing body of experience and lessons emerging from regional experiments in adaptive management through a network of practitioners (S. Light, personal communication). Among questions posed for this workshop were: Is adaptive management about incremental change or about fundamental reorganization and transformation? Do we clearly distinguish between "ecosystem management" and "adaptive management," and if so, how?

Adaptive management is the organizing framework for scientific monitoring, research and decision making in the GCMRC program. It is mandated in the Glen Canyon Dam EIS and Record of Decision. In one sense, the Adaptive Management Program (AMP) builds upon the exploratory and experimental efforts of the Glen Canyon Environmental Studies (GCES) (NRC, 1996). But, it also strives to organize those efforts in more focused, systematic, and formally designed ways. Adaptive management extends beyond the research and monitoring program to provide a basis for policy recommendations to the Secretary of Interior relative to the Secretary's responsibility in implementing the Grand Canyon Protection Act of 1992. Adaptive management is the process of implementing particular management actions in the face of some level of uncertainty regarding the outcomes of the actions. The uncertainty derives from complexity associated with managing large scale ecosystems wherein it is virtually impossible to under-

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stand all cause and effect interrelationships: thus the experimental approach known as adaptive management is a means of achieving the goals of ecosystem management.

Background

Management of a large scale riverine system such as the Colorado River in the Grand Canyon is a complex undertaking (Stanford *et al.,* 1996) This 277-mile reach of the river is an ecosystem by virtually any definition and must be managed as such. Indeed the five year strategic plan adopted by the AMWG in 1997 is replete with the terminology of ecosystem science and adaptive management (GCMRC, 1997). Despite this language, there has been a fundamental failure on the part of most AMP stakeholders to rigorously adopt the basic tenets of ecosystem management as the underlying purpose for their participation in the AMP. Most stakeholders are at the table primarily to advance the traditional goals of their individual agency or organization, rather than seeing their primary purpose in this endeavor as management of the ecosystem through an adaptive management process. Ecosystem science and management, while complex, is not new. No fewer than 18 federal agencies where claiming to be doing ecosystem management as of 1994 (Cortner and Moote, 1999). What is ecosystem management? And how is it done?

Likens (1992) stated: “The ultimate challenge for Ecology is to integrate and synthesize the ecological information available from all levels of inquiry into an understanding that is meaningful and useful to managers and decision makers.” Frank Golley (1993) writing about the history of ecosystem science stated: “It is not clear to me where ecology ends and the study of the ethics of nature begins, nor is it clear to me where biological ecology ends and human ecology begins. These divisions become less and less useful. Clearly, the ecosystem, for some at least, has provided a basis for moving beyond strictly scientific questions to deeper questions of how humans should live with each other and the environment. In that sense, the ecosystem concept continues to grow and develop as it serves a larger purpose.” Ecosystem management has been variously described, although a reasonable working definition was provided by Moote *et al.,* 1994: “Ecosystem management is a management philosophy which focuses on desired status, rather than system outputs, and which recognizes the need to protect or restore critical ecological components, functions, and structures in order to sustain resources in perpetuity.”

Many of the shortcomings identified by the recent NRC committee were in some way an outgrowth of the failure (at least to date) to take seriously the conceptual and philosophical basis for ecosystem management. These shortcomings ought not to be taken as evidence that this AMP or the GCMRC has itself failed but rather as an indication that the degree of maturation necessary for building success has not yet been attained. This is a developing management process and much has been accomplished by both GCMRC and the overall AMP.

NRC Committee Findings-A Selective Summary[2]

Downstream: Conclusions and recommendations

1. Strategic planning and adaptive management issues
2. Science program issues
3. Organizational and budget issues
4. Strategic planning and adaptive management issues

Strategic planning issues

1. Build upon the value of the center's strategic plan
2. Identify strategic priorities for the next five years (building explicitly upon experience of the past two years).
3. Manage geographic scope (considering ecosystem processes, management alternatives, funding sources, and stakeholder interests).
4. Consider decadal time scales (relate five-year plan to multidecadal ecological and social processes).
5. Develop a strategy for scientific evaluation of management alternatives (in terms of ecological outcomes and stakeholder satisfaction).

Adaptive management issues

1. Definition and roles: Work toward a common definition of adaptive management for the grand canyon ecosystem; clarify the center's roles in the program.
2. Core adaptive management experiment: Clearly articulate the core adaptive management experiment and, in particular, hypothesized relations among dam operations, ecosystem responses, cultural effects, and trade-offs among consequent socioeconomic effects.
3. Issues of vision: Recognize limitations of the current pluralistic situation; present a strategy for moving toward common objectives and reference conditions for monitoring and research over the next five years.
4. Issues of vision: Recognize limitations of the current pluralistic situation; present a strategy for moving toward common objectives and reference conditions for monitoring and research over the next five years.
5. Management objectives and information needs: work with the technical work group to develop a revised set of MOs and INs, linked with testable hypotheses, and situated within an internally consistent understanding of the ecosystem.
6. Decision support systems and scientific bases for trade-off analysis: recognize and anticipate trade-offs among management objectives in adaptive management. begin to develop mechanisms for equitable weighting of competing interests, and scientific decision support systems and methods.
7. Independent science review: to ensure independent programmatic review, the science advisory board should not be a subcommittee of the AMWG and should not have formal constraints on issues it deems relevant to its charge.

[2]For additional details please see *Downstream: Adaptive Management of Glen Canyon Dam and the Colorado Rover Ecosystem,* National Research Council, National Academy Press, Washington, DC

Science program Issues
1. Ecosystem monitoring
2. Physical resources program
3. Biological resources program
4. Sociocultural resources program
5. Information technology program

Physical resources program
1. Complete sediment budget
2. Develop long-term sand budget for Glen and Marble canyons; and track the transport of tributary sediment inputs through Marble Canyon.
3. Evaluate potential sediment conservation effects of BHBFs for larger flows and in all months.

Biological resources program
1. Include a detailed review of existing biological knowledge to promote scientific reconstruction of biological changes in Grand Canyon.
2. Shift from a species-oriented emphasis toward broader monitoring and research on communities and ecosystems.
3. Address biological aspects of temperature-control experiments involving the proposed selective withdrawal structure at Glen Canyon Dam.

Sociocultural Resources Programs

Cultural resources
1. Strive to coordinate cultural resources and socioeconomic programs; further coordination of cultural resources subprograms is needed.
2. Look forward to including a wider range of social groups within the scope of cultural resources monitoring and research.
3. Seek adaptive management insights from archaeological evidence and ethnographic perspectives.
4. Secure resources for full tribal participation in monitoring, research, and communication, without reducing other cultural resources program components

Socioeconomic resources
1. Develop internal expertise in non-market valuation of ecosystems and their services.
2. Seek to understand the degree to which ecosystem features and activities are valued.
3. Seek funding for original research to measure grand canyon ecosystem values, using scientific sampling of all stakeholders.
4. Develop a socioeconomic and cultural basis for evaluating experimental outcomes.

Information Technology Program
1. Survey information users to determine needs.
2. Assign higher priority to data archiving.

3. Expand and accelerate data and information delivery via the World Wide Web.
4. Manage computer system administration independent from canyon-specific activities
5. Begin to plan and develop a computerized decision support system.

Organizational and budget Issues

1. Roles of the center: review operational relationships and responsibilities; avoid disproportionate oversight.
2. Institutional home criteria: the center should be:
   - Housed within premier science organization committed to physical, biological, and social inquiry.
   - Enabled to work effectively with all management agencies.
   - Enabled to communicate scientific program issues and results with a management team at the assistant secretary level.
   - Independent from any single stakeholder management organization.
3. Center structure and staffing
   - Appoint senior scientist and adaptive management specialist
   - Additional staff and associated budget seem warranted for physical, cultural, and socioeconomic resources programs.
4. Funding and budget
   - Consider using hydropower revenues to support core research, monitoring and adaptive management program activities … at full funding levels envisioned for the next five years and beyond
   - Supplemental budgets for additional activities could be developed from U.S. Department of the Interior agencies, other federal agencies, and foundation sources.

From the Rim

Conflict resolution: Is adaptive management the path of last resort? Adaptive management may be like a twelve-step program for ecosystems (S. Light, personal communication). This means it is probably very hard work and can only be undertaken effectively when the client is willing to recognize that a problem exists. In the case of the Glen Canyon AMP this requires 25 plus stakeholders taking 12 steps together, in unison. It is no wonder progress has been somewhat slow. However, the NRC called this particular adaptive management program “a science policy experiment of local, regional, national, and international importance (NRC, 1999). Therefore the work must continue. In July of 1999 the AMWG adopted a vision and mission statement which recognized ecosystem management and adaptive management as guiding principles (Barry Gold, personal communication). However the degree to which this document is sufficiently precise as to allow effective implementation of adaptive management remains unknown.

There does not appear to be a working definition of adaptive management, which has been adopted by the AMWG. The only evidence to the contrary is reference in the strategic plan to definitions derived from other programs or the literature. There is need for an explicit working definition for the Grand Canyon AMP. Furthermore, once such a definition is adopted, there does not appear to be any group among all the stakeholders that represents the “interest” of the experiments. Currently this leads to the GCMRC

representing the need for ecosystem management and science, often placing it in an adversarial relationship with stakeholders who have not yet adopted a well defined definition of the desired ecosystem status. A remedy for this problem will only occur when the GCMRC is viewed as an objective science source collecting information for a common vision.

The science program of the GCMRC should be founded on two pillars: the management objectives identified by the stakeholders and the development of a comprehensive understanding of relevant ecological processes (Rogers, 1998). Without the first pillar, the science program may wander from its goal of understanding the effects of dam operation on downstream resources; without the second, the management plans will likely fail because an inadequate understanding of underlying fundamental processes will certainly, over time, lead to undesirable surprises in ecosystem response. Therefore the development of the science program needs to consider the information needs identified by the stakeholders, as well as the information needs of ecosystem science.

Need for "Vision"

The most important issue with respect to scientific coherence is the failure of GCMRC or any other entity in the AMP to develop a vision of what is being sought in terms of the "ecosystem." Until such a vision is agreed upon in at least a general sense, it will be difficult for anyone to create a coherent program, which meets the tenets of ecosystem science <u>and</u> adaptive management as spelled out in the GCDEIS and ROD. The nine resource areas in which management objectives and attendant information needs have been developed are in accord with the resource areas identified in the GCDEIS. This document (p.53) states that "reasonable objectives, developed by the management agencies, are goals for future management of these resources and provide meaning to the terms 'protect,' 'mitigate,' and 'improve,'" referring to those terms in the GCPA. This seems to be the only attempt to define what constitutes a future desired state of the Colorado River ecosystem in Grand Canyon. The EIS goes on to say "Attainment of objectives for all resources will require complex interagency planning and management. Some issues would remain unresolved under any alternative."

Thus the AMP is left with a list of nine resource areas each of which have there own MOs and INs. No formal attempt has been made to ascertain the compatibility or incompatibility of these MOs with one another, nor how they may or may not fit into an ecosystem context based upon science information. (Progress is being made on reducing the number of MOs and determining their compatibility at this writing—Barry Gold, personal communication.) This matter is further complicated by presumably collapsing these nine resource areas into four or five program areas of the GCMRC for purposes of research and monitoring. There does not appear to have been any effort to describe which resource areas fit discretely in which program areas, which have overlap, etc., nor how they relate to a vision for the desired state of the ecosystem.

Someone (presumably the AMWG) needs to take on the chore of translating the broad language in the GCPA, GCEIS, and ROD, regarding purposes for which GNP and GCNRA were created, into something more practical against which the AMP can be

designed and evaluated. The parties in the AMP will ultimately need to understand and endorse the emerging concepts of conservation ecology wherein there exists substantial uncertainty and a willingness to make the decisions characteristic of adaptive management with less than perfect or even highly imperfect information. This requires accepting the uncertain and thinking about science in ways different from what people are used to (Holling, 1998). Until a vision is created and agreed upon however, there will be no comprehensive principles around which to organize the complex research, monitoring, interpretation, and policy recommendations needed for the Colorado River in Grand Canyon.

Defining the Current Experiment

Another overriding issue with respect to how the AMP is fulfilling the mandates of the GCPA, GCEIS, and the ROD is the failure to articulate a clear process for using ecosystem science as a part of the management and policy recommendation process. This seems at least partially due to the failure to state "what" the current adaptive management experiment is and "how" it is being evaluated. Although there are numerous discussions in guidance documents and plans about this issue, there is not evidence that these principles of science-based management and ecosystem integration have yet been put into practice. For example, management actions (presumably dam releases and their patterns) are to be considered experiments, and the experiments are to have clearly defined hypotheses as to their expected outcomes across the various resources areas and the ecosystem as a whole. Despite this stated approach there is little if any discussion of hypotheses nor integration of antecedent information in the resource program activities or any ecosystem level approach to the management experiment. This is the essence of "adaptive management," i.e., taking an action which is anticipated to effect the resource in a manner consistent with management objectives, but it seems to get lost in the AMP process as conducted to date. In fact the AMP is about to embark upon its third set of "experimental" flows (low steady summer flows) without having effectively put in place a monitoring program nor articulated the prior experiments nor their impacts, except for perhaps those on some physical resources. The AMP is in effect "tinkering" with the system (see spurious certitude below).

Membership, Representation, and Voting Blocks

There appears to be evidence in my observation of the AMWG for voting blocks to develop. This is particularly true with the seven state representatives (all representing traditional water interests), the USBR, USDOE, and the two power use groups. Another voting block might be envisioned among the four Department of the Interior agencies or the six tribes. This potential problem could be overcome with true adoption of an ecosystem management paradigm.

Facilitation and FACA

The AMWG could benefit from adoption of a facilitation model wherein a truly independent facilitator, not coming from any of the groups involved as stakeholders, would run the AMWG meetings. This might require consideration of non-FACA status for the AMWG. This would be a real possibility given the strength of the assembled members if they were motivated to represent their interests to the Secretary of the Interior. Pros and

cons of FACA status have been discussed by several authors including Lynch, 1996, and Rieke, 1997. The AMWG under its current FACA charter has an undeniably heavy influence from the USBR, the Department of the Interior, and the federal government, although these entities constitute less than half of its membership.

Conclusions

There is a tantalizing and challenging air of potential self-determination about the unfolding adaptive management program for Glen Canyon Dam and the Colorado River ecosystem in Grand Canyon. Meeting the challenge will require more formal and rigorous adoption of the adaptive management paradigm and the uncertainty it brings with it. Stakeholders are currently at risk of falling into the pathologies of adaptive management (Gunderson, 1995). In closing, a cautionary or optimistic note can be found in the introduction to a recent paper by Gunderson (1999):

> Resource managers constantly grapple with uncertainty. One approach is to assume away the problem, as e.g., with Secretary Babbitt's 'no surprises' policy with respect to ESA.
>
> Another approach is to seek spurious certitude, that is, to break the problem or issue into trivial questions spawning answers and policy actions that are unambiguously 'correct,' but, in the end are either irrelevant or pathologic. Perhaps the most common solution is to replace the uncertainty of resource issues with the certainty of a process, whether that process is a legal vehicle—such as a new policy, regulation, or lawsuit—or a new institution—such as a technical oversight committee or science advisory committee.
>
> Yet another solution is to confront the uncertainties, a central tenet of Adaptive Environmental Assessment and Management or AEAM.
>
> AEAM has been promulgated as an integrated, multidisciplinary approach for confronting uncertainty in natural resource issues. It is adaptive because it acknowledges that managed resources will always change as a result of human intervention, that surprises are inevitable, and that new uncertainties will emerge. Active learning is the way in which the uncertainty is winnowed. Adaptive management acknowledges that policies must satisfy social objectives, but also must be continually modified and flexible for adaptation to these surprises.
>
> Adaptive Management therefore views policy as hypotheses; that is, most policies are really questions masquerading as answers. Because policies are questions, then management actions become treatments in an experimental sense. Although some learning occurs regardless of the management approach, AM is structured to make that learning more efficient…indicating successes in technical approaches and transformation of understanding.
>
> A central proposition is that successes and failures of AEAM are intertwined with the system properties of flexibility and resilience.

In a nutshell, if there is no resilience in the ecological system, nor flexibility among stakeholders in the coupled social system, then one simply cannot manage adaptively.

Where will the Glen Canyon AMP go in the future?

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Role of Science in Management and Decision Making Affecting Natural Systems

By Dr. Charles Groat, Director, USGS

USGS Science for Natural Systems Management and Restoration

- Everglades
- San Francisco Bay-Delta (CALFED)
- Mojave Desert
- Chesapeake Bay
- Colorado River
- Salton Sea
- Yellowstone National Park
- Great Lakes

Underlying Premises

For science to be effective it must meet certain requirements.

- Understanding the system being managed (its components and their processes, interactions, and sensitivities) is essential to maintaining the integrity of the system.
- Being able to demonstrate the effects of various natural processes and management decisions on the system is essential.
- A substantive role for science in management depends on the effective and timely communication of scientific understandings and effects of actions to decision makers.

Role of Science Varies in Decision Making

Recognize that the role of science in decision making (resolving conflicts) varies.

- If the management objective is to preserve, restore, or enhance a natural system, science will play one type of role.
- If other objectives, such as maximizing economic return, accommodating certain land-use practices, or meeting a siting preference, are the highest priorities, science will play a different, sometimes lesser, role.

Understanding the System: Elements of the Program

Scientists must recognize that other factors enter in.

- Science program planning process that includes input from decision makers to ensure their needs will be met and that the science program is consistent with management objectives
  —Expectations clear up front.
- Integrated science program that fully considers the system components and natural processes that will be affected by management decisions.
- Coordination and leadership to keep the science program relevant and on track. Not science's strong suit.
  —Individualistic behavior of scientists.
- Credibility of results through objectivity of the scientists and peer review of their work.
  —Conflicts over credibility aren't helpful.

Demonstrating the Effects of Processes and Decisions

- Key word is "demonstrating." Science is more useful if goes beyond describing.
- Comparing the characteristics of the system under both the natural and managed conditions with objective evaluation of the differences. Understanding (agreement) how a managed system can practically approach a natural one should be settled as early as possible.
  —Starting with unrealistic expectations spawns conflict.
- Using data-driven models whenever possible.

Effective and Timely Communication

- Traditional science products generally don't do the job.
  —Technical papers in journals.
- New, "high-tech" products, such as geographic information systems, are commonly one step away from being effective.
  —Okay for scientists.
- Visualization is the silver bullet.
- Decision support systems serve complex systems best.
- Being too late with the right product doesn't win friends for science.
  —Science delivery not always timely.

USGS Role in Science for Decision Making

Major commitment to serve societal needs

- Safer communities
- Livable communities
- Protecting America's natural heritage
- Wise use of resources

Supporting decision making by supplying objective, credible science based on the discipline mix we have

- Biology
- Geography
- Geology
- Hydrology
- Information systems

Resources and systems

- Natural systems
- Earth processes
- Natural hazards
- Human impacts
- Resources—water, energy, minerals, biological resources

The Glen Canyon Dam Adaptive Management Program: Current Challenges

By Randall Peterson, Manager, Adaptive Management and Environmental Resources Division, USBR

The Glen Canyon Dam Adaptive Management Program (GCDAMP) has brought together a diverse group of stakeholders to address the management of the dam in meeting the purposes of the 1992 Grand Canyon Protection Act, as well as other existing statutes and purposes. By fostering discussion between these parties, this program facilitates the interface between policy decision making and scientific research and input.

This paper addresses three key issues of this interface; the objectivity of scientific investigation, boundaries or constraints on the adaptive management process, and the need for experimentation in management actions.

Scientific Objectivity

Resource management decisions rely on credible information to properly understand the implications of specific actions. Ecological impacts are complex and often poorly understood, factors which add uncertainty to research conclusions. To reduce the negative impacts of this uncertainty, research conclusions must convey objectivity and trustworthiness to the stakeholders. The GCDAMP accomplishes this through three mechanisms: the review of existing monitoring and research activities by protocol evaluation panels, solicitations for work through a request for proposal process, and the central coordination of scientific activities.

Protocol evaluation panels are the external review mechanism by which current scientific thinking is challenged. Reviewers on each panel are experts to each discipline, without conflict of interest concerns. Panels address the entire scope of the monitoring and research for each of the general program areas of physical, biological, cultural, and information technology, as well as specific resource areas. Recommendations often address research and coordination processes as well as the actual monitoring work, and offer solutions which are designed to strengthen the scientific integrity of the program.

In contrast, the request for proposal policy is an internal attempt to diversify the individual researchers involved in the program and the intellectual scope of proposed research. It introduces financial and intellectual competition, and brings another source of outside review into the process through the use of peer reviews of proposals.

Central coordination attempts to avoid the duplication of research effort that could result from individual stakeholders financing their own research work. Duplicative and competing research results would likely confuse management action decision making and negate the cooperative spirit of stakeholder involvement. Stakeholder buy-in of

research results is key to progress in understanding the impacts of management actions and the search for mutually agreeable solutions. However, a centrally coordinated science program does not infer a recommendation for in-house research, which would be at odds with the goals of external research and review.

Boundaries or Constraints

The role of boundaries or constraints in adaptive management has not been commonly discussed, primarily because adaptive management is often seen as “thinking outside the box” in a search for innovative solutions. Constraints could be seen as potentially limiting the process from finding the best solution.

In a practical sense, however, human beings use constraints in a positive way to limit the solution space in the search for solutions. An analogy between human thought processes and computer modeling algorithms explains this role.

Both dynamic and linear programming techniques use constraints in solution-seeking. Dynamic algorithms restrict the solution space through constraints and find a solution in an organized searching process. Tabulation of benefits or penalties resulting from this searching allows the user to determine the best discrete solution. Linear algorithms define relationships through equations, then solve the equations. However in both cases, boundary constraints can result in no feasible solution, an unbounded solution, or an infinite number of solutions.

Since nonscientific humans seldom approach complex situations by formulating equations, it seems likely that a dynamic programming approach better explains how most people seek solutions. In GCDAMP discussions, our experience has been that stakeholders are more likely to successfully resolve a problem when there are constraints which limit the complexity of the problem. However, it seems unlikely that an ecosystem would be anything but complex, thus these stakeholder solutions could be viewed as piecemeal and without sufficient resource integration. In the preparation of the GCDEIS, a table was prepared listing the impacts of the various alternatives on resources of concern and the preferred alternative was basically selected as providing the greatest ecological benefit at an acceptable economic impact to power generation.

Optimization algorithms offer a similar view of problem solving, where stakeholders would accept solutions which offer the greatest value” to a mixed set of resources. The challenges of agreeing on a common comparison metric such as monetary value and the debate over non-use values has thus far hindered any direct optimization solutions. However, from a pragmatic perspective, stakeholder satisfaction may ultimately serve as an optimization metric. Solutions could be sought which offer some degree of benefit to each stakeholder. If this were the case, decision making could be based on the political and social science nature of stakeholder interaction as well as on the scientific conclusions of resource monitoring.

EXPERIMENTATION

The GCDAMP has used both long term monitoring and specific experimental results to increase scientific understanding of Grand Canyon processes. Long term monitoring is crucial to detecting ecosystem processes due to the extended time over which processes or resources change, particularly the case with most of the resources in the Grand Canyon. However, extended time scales and complex ecosystem linkages can easily cloud causal relationships between management actions and resource impacts.

Experimentation offers a clearer path for discovering these relationships by isolating specific management action variables. The GCDAMP used experimentation to test the viability of Beach Habitat building flows in the 1996 nationally televised event (peak release of 45,000 cfs), the 1997 habitat maintenance flow (maximum power plant releases of 31,000 cfs), and the 2000 test of low steady summer flows (8,000 cfs release for the June-September period and two short duration 31,000 cfs releases in May and September). Experiments which deviate most significantly from normal management actions have the highest likelihood of exhibiting measurable impacts. However, since most ecological systems have experienced extreme events, it is probable that even the most aggressive experiments lie within historic contexts, alleviating some of the risk management concerns.

Experimentation in natural systems faces the challenges of limited controls, internal dynamics of target resources, and potentially short lead time.

Control of ecological variables outside a laboratory setting is difficult to achieve. Random climatic events or human impacts result in the potential for a “contaminated” sample, and researchers must then dissect the impacts of the experimental variables. During the previously mentioned tests, antecedent conditions, tributary inflows and power generation emergencies modified either the Glen Canyon Dam release regime or the resources of interest.

Internal dynamics of resources complicates the discernment of cause and effect. Fishery resources particularly have high variances of sampling success and even long term trends are difficult to detect. Methods and timing of sampling must be rigorously followed to ensure comparability of measurements. Attempting a greater understanding, the GCDAMP is now in the process of collating and analyzing all historic native fish data in an effort to determine true population status and trends as a prerequisite to recommending alternative management actions.

The bureaucratic nature of contract administration also complicates conducting ecological experiments if the experiment is tied to some type of random or climatic triggering mechanism. Researchers are often unable to adequately respond to very short warning times. Possible solutions include experimental designs prepared in advance, more flexible contracting procedures including indefinite deliverable and quantity contracts, and more extensive monitoring protocols which would capture the impacts of experimental events. Each of these would increase the costs of experimentation, but could be

necessary if the experiment were unable to be committed and scheduled in advance. In contrast, a defined program of experimentation would offer an integrated and rigorous approach to adaptive management learning. The GCDAMP has both types of experimentation, and is moving in the direction of more rigorously planned experimentation as well as more comprehensive long term monitoring.

Guidance for Environmental Advocates Considering Collaborative Processes

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Frank Dukes, Institute for Environmental Negotiation, University of Virginia, Charlottesville, VA

Panelists

Karen Firehock, Institute for Environmental Negotiation, University of Virginia

Michael Leahy, National Audubon Society

Michael McCloskey, Sierra Club

Steven Whitney, The Wilderness Society

Panel Abstract

This panel will discuss guidance being developed for environmental advocates considering the use of collaborative processes to address environmental issues for public lands and natural resources. The National Audubon Society (NAS), The Wilderness Society (TWS), and the Institute for Environmental Negotiation (IEN) of the University of Virginia are coordinating a project to develop guidance for environmental advocates considering convening or participating in collaborative processes to address natural resource issues. These collaborative efforts are becoming increasingly popular but also increasingly controversial. The guidance will cover considerations of when collaborative approaches may be appropriate and when they are not; how to effectively convene, coordinate, and participate in collaborative approaches to environmental management; and key considerations for implementation and monitoring of agreements. Panelists will offer reflections from environmental advocates from recent workshops concerning the use of collaborative processes for resolving environmental disputes.

Individual Papers

Guidance for Environmental Activists Considering Participation in Collaborative Processes
By Karen Firehock

Guidance For Environmental Advocates Considering Use of Collaborative Processes
By Michael McCloskey

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Guidance for Environmental Activists Considering Participation in Collaborative Processes

By Karen Firehock, Senior Associate, Institute for Environmental Negotiation at the University of Virginia

As you have heard from fellow panelists, there exists a good deal of controversy surrounding the use of collaborative processes to manage natural resources. The National Audubon Society (NAS), The Wilderness Society (TWS) and the Institute for Environmental Negotiation (IEN) of the University of Virginia are coordinating a project to develop guidance for environmental advocates who may consider convening or participating in collaborative processes to address natural resource issues. Such collaborative efforts are becoming increasingly popular, but also increasingly controversial, and are the subject of a great deal of study by researchers and articles in the popular and academic press. The guidance to be developed by the NAS, TWS, and IEN will not duplicate existing guides or handbooks. Rather, it will be a user-friendly document geared specifically to address the needs of the environmental community.

We have focused our project primarily around conflicts over the management of publicly owned or managed resources, such as federal lands or endangered species because that is where most of the controversy exists. However, the handbook we are developing will be useful to a broad range of issues, including private lands issues. Government agencies, funders, and others may also find the guidance a valuable tool in convening, participating in, or evaluating these processes. The guidance will be completed by late fall 2000. Funding to develop and publish the guidance is provided by a grant from the William and Flora Hewlett Foundation. We have held two workshops, in Colorado and Washington D.C. to solicit input from the environmental community concerning their experiences with collaborative processes to manage natural resources. Following is a brief summary of some, but not all, of the concerns from those workshops and from our research conducted over the past few years.

Questions of Power

The central question concerns, “What is the conflict surrounding the use of collaborative processes to manage public resources?” One of the main concerns centers around the question of power and who should hold it. For example, “Who gets to have the power to decide how a resource should be managed?” The local community? The agency? The stakeholders? Local interests want input into how lands and natural resources around them are managed, national interests want input into management of resources held as part of the public trust which are under the proprietorship of all Americans, while agencies have the responsibility to institute management strategies.

Agencies have the power to manage public resources and must conduct some level of public participation yet they may exercise wide latitude in how and when decisions are made and how much participation is adequate and/or desirable. They also determine how and to what degree to respond to public concerns, based on statutory requirements

and the nature of the debate. The increasing popularity among agencies in using collaboration has led to charges of inappropriate application of the process for some issues, appropriate application but poor execution in carrying out the process, and/or lack of a feasible implementation strategy.

Some boosters of collaboration have called the collaborative movement at the local level a new form of governance while others maintain that this is simply the normal American democratic system of governance in action.

Types of Interests

"Stakeholder" is a term which refers to those who have "stake" in the outcome. The question of whom constitutes the stakeholders in another area of controversy. The traditional typology is to categorize groups or people as communities of interest or communities of place and then to segregate various "interests" into particular sectors, e.g., the environmentalists, the business interests, the government, etc. Some participants in collaborative processes have argued that local communities are both communities of interest and place. They have an interest in the outcome because the land constitutes their local environment, which provides values such as aesthetics, income, recreation, etc., and they are a community of place, which is dependent on the outcomes of decisions concerning local land and resource management. The controversy surrounds how much power, stake, etc., these local communities have in the decisions affecting those resources that are local but are "owned" by all Americans. Environmentalists maintain that they are representing communities of interest and should be considered stakeholders as they represent environmental concerns about publicly held resources whether or not the group is located physically within or adjacent to the land or resource in question.

Who Are the Players and Who Can Represent Them?

Conflict arises over what interests are represented and whether those interests are fairly apportioned. For example, if I say I am the Lorax and I speak for the trees, who authorizes me to represent the trees? Can I appoint myself? A challenge for agencies is determining who can participate, whether participation is limited, and if so, limited to what interests? It may be difficult to determine when you have achieved *adequate* representation. Environmentalists are often lumped into one group, e.g., "We have an environmentalist on the committee so that sector can be considered represented." This same problem may affect representatives of other interest sectors, such as industry or government. Thus, additional conflict arises when the environmental community is characterized as represented in a process and yet other environmental interests state those selected or self-appointed groups are not representative of the diversity of views or geography of concern.

The issue of representation also relates to scale of representation, e.g., "What scale is required in selecting the players?" Process designers and conveners have to ask "Should or can all issues surrounding federally managed or owned resources have

representation from regional or national groups?" This requires consideration of what are the practical matters associated in trying to participate in locally run processes. Those convening these processes have to determine what are the options for avenues of participation that allow the process not to get bogged down while still allowing for informed discourse among a greater diversity of stakeholders.

Is Collaboration Appropriate?

At the core of the controversy is the determination of whether a collaborative process is appropriate for what is to be negotiated. For example, is the issue appropriate for a group process from the legal, institutional, and scientific sense? Who should decide how a national forest is to be managed and what level of involvement by the public is desirable or appropriate? Some might say that there is a danger in being overcritical of collaborative processes because a reaction could be to have a return to a more formal process with less meaningful interaction between agencies and the public and less understanding, as parties stand behind traditional walls and lob missives over to the other side. Conversely, some critics have claimed that it is preferable to have these firewalls in place and well defined, rather than have inappropriate communications and influence that give one or more groups greater influence than another.

What Is the Process and Who Originates It?

On the other hand, it is fair to ask is this anything new? Are more laws, more mandatory delineated participation processes the only way to ensure a fair, open and appropriate process? This leads to the question of what type of process is appropriate and whether that process should be more or less formal. If a local private group decides to convene a roundtable and make recommendations to an agency, who says they need to involve others?

Related to questions of fair process is, "Can and should a local group have to follow 'best practices' and are those practices too burdensome?" For example, guidelines on how to hire a mediator or how to enlist expert consultants may not be particularly useful to a nonprofit group with limited or no resources. What may be more useful is to provide guidelines on how to run open, fair, and inclusive processes that are written so that the local group can apply and follow them. In a discussion with community collaborative groups held at our fall 1999 meeting in Tucson, this was the comment from one of the local collaborative groups: "Rather than criticize us for not following standard practices, why not work with us and teach us how to design processes that work and are deemed fair by both people from within and without?"

Do We Have the Information to Make the Best Decision?

Issues concerning the use of scientific information in the process and how management plans will be applied are also an area of concern and controversy. For example, if the issue to be resolved concerns something which is new or for which consequences are unknown, such as an experimental timber management plan or a species reintroduc-

tion, do we have the input from knowledgeable scientists, from those familiar with the landscape in order to make the best decision and ensure successful implementation that meets management goals?

- Are our sources of decision data credible? Mostly neutral?
- Do we know what we need to know and can we identify what we don't know?
- Do we risk being paralyzed in our search for the ultimate certainty?

Another related concern is the question of who serves as the scientific consultant and who decides. A collaboration should not operate as a legal case with opposing counsel bringing scientific experts to offer point-counterpoint data battles. However, it is not uncommon for scientists to disagree. There needs to be a process in place to address and, if possible, resolve differences in interpretations. Setting up technical working groups of scientists in tandem with the process is one approach that has worked well. We have taken this approach for many projects coordinated by the Institute, such as the Bi-State Blue Crab advisory committee's technical working group, which we facilitate for Maryland and Virginia. However, as stated, scientists do not always agree and we have had to have separate discussions and charrets with the scientists. The scientists had agreed that a target range for crabs should be set that would be considered sustainable and to recommend management approaches that would ensure the crab population is sustained within that range. However, they could not agree how many crabs there were in the first place, thus they could not establish a population range and without a population range, they can not recommend management strategies. Scientists from the technical working group are now working to resolve these issues so that the process can move forward. This is an example of how simply ensuring that the right players are involved and that there is a process for incorporating sound science into the process is not the end of the consideration.

What Are the Decision's Impacts on the Ground, in the Water, etc.?

Perhaps the greatest criticism of using collaborative processes to manage publicly held resources concerns the monitoring of agreements. Even with the best consultation with the scientific community, nature has a way of not always following our best estimates of what will happen based on the great number of variables which will affect the outcome. Development of implementation monitoring plans is one way to address this. However, process designers still need to consider what will be the process for using the monitoring results. For example, if a negotiated monitoring plan is put in place to monitor the outcome of a particular agreement, what will be the process of revisiting the agreement if monitoring shows that the plan is not having its intended consequences or, even worse, is harming the resource? Additional questions to address in devising monitoring plans include:

- Does the agreement stipulate what entity will conduct follow-up monitoring and will they have the power to make whatever changes are needed, based on their best professional judgement?

- Does or should the implementing group have to go back to the committee to make changes to implementation plans?
- Can an agency function by committee and how will the agency utilize the monitoring findings?

All party monitoring is one approach being tried by some community collaborative groups, such as the Applegate Partnership, to resolve the issue of stakeholder involvement in monitoring of impacts of agreements, by involving a diversity of stakeholders in conducting the monitoring and working jointly to evaluate how well it is working. However, before changes are made to an agreement, one needs to consider how much change is acceptable to the original plan before the agreement is significantly different enough that it no longer resembles what was negotiated? Adaptive management is a popular approach to managing in a changing environment and assumes we don't or can't know all the impacts up front. The question is, will the agreement be "adapted" away?

Note: Handouts for this presentation included a two-page fact sheet on the project and a two-page summary of the workshops held in Colorado and Washington D.C. These are available by request to kef8w@virginia.edu.

Guidance for Environmental Advocates Considering Use of Collaborative Processes

By Michael McCloskey

Collaborative processes (CPs) are being put forth in a time when confidence in government and large institutions is low, voter participation is down, and the public is tired of political wrangling. Thus, there is an appetite for a more productive and agreeable approach at a manageable scale.

Moreover, many have come to feel that decisions can only be legitimated by their personal "buy-in." Many under the age of 50 feel this way.

Thus, CPs are advanced as the "better way."

While proponents of CPs are not always clear about whether agency authority should remain alive, at least nominally, they are clear that in practice they want the outcome of CPs to provide the template for what is done. They want to make public policy and to shape outcomes on the ground.

Perspectives

Oddly enough, the idea of CPs attracts support across the political spectrum. Rebels against authority see it as a way to undermine established institutions and to take away

their authority. Because group processes are in vogue in academia, many there like it too. Theorists who romanticize the local, the particular, and the politics of place also welcome it. Business interests see it as a way to get out from under regulations that they resent—and to move issues into forums where they stand a better chance of prevailing. Politicians see it as a way to toss political "hot potatoes" into someone else's lap. And local interests see it as a way to capture control of issues that have gone against them in recent years.

At the national level many mainstream environmental groups understand that they have made progress on their issues over the past century mainly by bringing these issues to the national level and by getting the federal government to assert leadership and control. Local control of these issues meant exploitation and the predominance of narrow, private interests over a broader national interest.

However, most federal agencies have long since lost their zeal for reform and have become ingrown and self-directed. Thus, the environmental community is also dissatisfied with the status quo. There is an appetite for trying different approaches and a disenchantment with traditional solutions. Moreover, some constituencies are tired of conflict and want to believe that broad agreement exists. Thus, environmental groups are not all of one mind about the appropriate role for CPs.

Needs

The Sierra Club has been around for a long time. It does not forget the lessons of history. It knows that the rural-urban split has not gone away—that the views, interests, and aims of rural and urban populations still diverge sharply. It is not ready to surrender national interests in the environment to rural local interests. It believes that devolution and localism are a prescription for disaster. Notwithstanding the migration in recent decades of urban expatriates to the rural West, those who represent these regions in legislative bodies still embody little or no sensitivity to environmental concerns. And they are this way because that is the way most of their constituents are.

CPs represent a beguiling pathway toward devolution and localism. While it is packaged in ways that "boomers" can hardly withstand, its triumph in service to these ends would affect a massive transfer of power, a repudiation of the progress of the past century, a collapse in environmental gains, and a grievous wound to the practice of democracy.

Specific Concerns

For many of the boomer generation, collaboration almost represents a self-evident "good." It embodies a central premise of their generational world view that consent in every case must be negotiated. However, for others this infatuation is all very peculiar. In their view, collaboration is merely a tool that has appropriate and inappropriate uses and upsides and downsides. Nothing about it is self-evident at all.

Traditionally, public policy is made by those who garner the most support from the public in an election. It is also made by appointees of those who have been elected. And in deliberative bodies, decisions are made by majority rule. This is the heart of our culturally accepted practice of democracy. In the long run, it works better than any other way.

However, now we confront a new demand that this be turned on its head.

Decision making on matters of public policy would arise from processes with no connection to elections. Random collections of self-selected parties would be given the power to decide what is to happen. The legitimacy for such an exercise of power would supposedly be found in the participation of everyone affected, with old practices of democracy permitted to atrophy.

But rarely in practice can everyone affected participate, nor is their participation welcomed nor facilitated. Moreover, many who are still committed to democracy have not agreed to this change in our system. Thus, this whole change in the fundamentals of our system lacks legitimacy. It is a generationally inspired cultural presumption.

The modus operandi of this new system essentially repudiates the operating premise of democracy, i.e., majority rule. Through CPs a supposedly representative group would not make decisions by majority rule but only by consensus. This mode of operation would go so far in protecting minority interests that it would overthrow majority rule. Majorities—even overwhelming ones—would be held hostage in CPs to the views of tiny minorities. This is the fundamental implication of the consensus rule. Nothing can go forward until everyone is agreeable.

The central premise of collaborative regimes is that harmony is more important than all other interests. It presumes that the status quo is always preferable to public discord. It reflects a lack of confidence in full-throated, open public debate as a way to develop the publics understanding and will. In fact, it de-legitimates public debate as the engine of democracy. And those who choose not to participate in this flawed process are given the message that they have lost their chance to shape the outcome.

By putting a premium on finding agreement, CP shifts the focus to the most tractable questions and away from the most important ones. It embodies a preference for an agreeable decision over an important one. And in tending to push groups toward the lowest common denominator, it may not foster creativity that matters. And the much-heralded creativity of CP may be more the exception than the rule in any event. Creativity is not necessarily the product of the process but more the product of creative people, who are not in ample supply.

And by focusing these processes at the local level, all of those stakeholders at a distance find themselves disadvantaged, if not disenfranchised. Where interests of broader import are at stake—as is often the case with natural resources in fixed locations—the greater public in larger jurisdictions may be the key stakeholder. But locally focused CPs would give them short shrift. Thus, the interests of the majority are treated as unimportant.

So through this process, various astounding results ensue:
- Democracy is displaced;
- National majorities are disenfranchised;
- Harmony is made our only interest:
- Our agendas are confined to the lowest common denominators; and
- Localism triumphs, and with it, provincialism.

Can you imagine such a result ever being forthrightly approved by the American people? Yet the promoters of CP insist that this is the imperative of the moment, and that our job is simply to "fine tune" it a bit more.

Reactions

The question before us is not whether CP should be used on occasion. It is a tool that may occasionally be useful, particularly where adequate government programs do not exist or no agency or unit of government has sufficient jurisdiction. Then ad hoc gatherings of interested parties may help fill a gap.

And there are occasions when it may be worth trying CPs to resolve deadlocks on important questions. Little is risked that way.

But a great deal is risked when CPs are put forth as the new way of doing regular business in the field of natural resources—when everything is pushed into this process. Now many reports call for turning decision making on public lands over to local collaboratives. When healthy public involvement and debate is suppressed and agency authority is undermined, then the processes of democratic governance are being displaced. And when the greater interests are being put into the hands of lesser interests, then democracy is in trouble.

Proposals of "best practices" for the use of CPs will not resolve questions of appropriate use. If use of CPs is the exception rather than the rule, then by all means the best practices should be used.
- People should not be coerced into participating;
- All those interested and affected should be part of the process, but no one interest should dominate;
- Interests should be able to pick their own representatives;
- Power imbalances in participating must be addressed;
- Meeting venues should be convenient for distant as well as nearby stakeholders;
- Good information must be available;
- Facilitators must be neutral and skilled;
- Ground rules should be set;
- The chance of success must be sufficient;
- The costs of participation must be reasonable; and
- Implementation must be monitored.

But CP is simply not the “right tool” for all occasions, or even most. Those who are pushing this agenda are trying to change the fundamentals of our form of government—albeit subtly.

If our form of government is to be changed, then those who want that change should put forth their proposals clearly and candidly and attempt to amend the constitution. Until then, we should not aid and abet aims that are fundamentally misguided.

Integrating Public Values, Technical Analysis, and Procedural Justice in Resolving Environmental Conflicts: Water Quality Regulations for the Neuse River

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Corrine Houpt, Duke Private Adjudication Center, Durham, NC

Panelists

Lynn Maguire, Nicholas School of the Environment, Duke University

Marion Smith, Neuse River Foundation

Panel Abstract

Panelists are developing an approach to environmental policy making that draws on technical analysis, analysis of public values, procedural justice theory, principled negotiation, and multicriteria decision making. Panelists will illustrate this approach by describing its application to a current environmental policy process with extensive public and stakeholder participation: setting new rules for controlling nutrient inputs to a North Carolina watershed suffering the effects of excessive nitrogen additions from both point and nonpoint sources. Panelists will also describe a new resource designed to provide high quality, nonpartisan, scientific and technical experts to assist in understanding and dealing with disputed scientific issues in environmental conflicts.

Individual Papers

Stakeholder in the Eye of the Storm
By Marion Smith

The Registry of Independent Scientific and Technical Advisors: A Program of the Private Adjudication Center
By Corrine Houpt

Public Values, Technical Analysis, and Procedural Justice in Environmental Conflicts
By Lynn A. Maguire

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Stakeholder in the Eye of the Storm

By Marion Smith, Executive Director, Neuse River Foundation

Life on the Neuse with a grassroots environmental advocacy group: A brief history of how NRF sponsored Riverkeeper got state and nation media attention for the water quality problems of the Neuse, and the subsequent governmental actions to address these problems.

Public values: Whose do you represent?

- Public Trust Doctrine—the rivers belong to all of us
- The public has many interest—often in conflict: Which ones do you support?
- Values change with understanding—how do you educate?
- Who put you in charge? What to say when you are challenged as a public interest group.

Technical analysis/working with scientists

- The challenge of identifying the right scientist
- Learning to recognize and survive hidden agendas
- Dealing with honest scientific conflict and uncertainty
- Translating complex science for real people

Procedural justice: Making the public effective in a public process!

- How do you sell alternative dispute resolution when conflict works?
- Knowing the many processes are available and picking the right one
- Moving from conflict into mediation—dealing with emotional whiplash—good cop/bad cop

Challenges of being a stakeholder for environmental nonprofit professions

- Juggling competing demands of other responsibilities
- Acquiring expertise and using it effectively in negotiation—know what you don't know, but don't sell yourself short
- Working with allied organizations to share the load

Learning to be an effective stakeholder

- The benefits of training—Natural Resources Leadership Institute
- Separating "interest" from "positions"
- Need to involve neighborhood/community or other unorganized interest groups in the process
- Internal and external communications—the challenge in free flowing negotiations

Are we being "stakeholder'd to death"?

- Learning to recognize when the stakeholder process is misused
- Involving volunteers and outside help—you can't do it all
- Recognizing stakeholder abuse—how to fight back (cost is a real killer for NGOs)
- Dealing with stakeholder burnout!

The Registry of Independent Scientific and Technical Advisors: A Program of the Private Adjudication Center

By Corrine Houpt, Duke University School of Law

Introduction and Background

Scientific and technological issues have become increasingly important in both complex and routine litigation. At the same time, concerns have grown that our judicial system is becoming incapable of managing and fairly resolving these controversies. Under the traditional adversary system, where the only scientific testimony presented is by competing experts hired by the parties to support their competing contentions, the costs of these cases are high and the decisions may not reflect sound science.

Last year, the Private Adjudication Center (the Center) began a new program to improve the use of science in legal decision making. We are establishing a registry of highly qualified independent scientific and technical experts who are willing to provide advice on issues of science and technology to courts, mediators, arbitrators and (by mutual agreement) to parties and lawyers in particular cases.

Planning for the registry has been underway for a number of years. A major planning conference, held in 1995, brought together a group of distinguished scientists, judges and lawyers to discuss and give direction to the proposed registry. Since then, operating guidelines have been formulated; a number of outstanding individuals (including U.S. Supreme Court Justice Stephen Breyer) have agreed to serve on our Advisory Council; the Center has received a foundation grant to assist with the start-up costs of the registry; and we are now providing services in a significant federal court case.

While the registry was originally conceived as a resource for courts, we believe it will find its greatest use and benefit as a tool for ADR professionals. In environmental conflicts, there is a particularly strong need for objective, nonpartisan analysis of the scientific and technical issues and for resolutions based on the best available information. In many cases, the key to reaching such resolutions may be a clear explanation of the scientific issues, from competent and trusted independent experts who can communicate effectively with the various stakeholders. Neutral experts in such cases may also provide advice on the feasibility and extent of further research where the science is uncertain and on alternative approaches to minimize risks. Mediators and facilitators involved in environmental disputes are in an ideal position to suggest the involvement of one or more independent scientific or technical experts, and the registry provides a means for identifying competent individuals with appropriate qualifications who are (and are perceived as) truly independent.

Registry Operations and Personnel

Registrants

The registry is intended to be a permanent activity of the Center, operating nationally and providing registrants over a wide range of scientific and technical disciplines. We have already recruited a strong initial group of Registrants in medical and health-related disciplines, and we are beginning to add experts in environmental fields.

Our selection criteria and the rules under which registrants operate are established with the advice of our Advisory Council. We are recruiting scientists with excellent academic credentials, significant practice and/or research experience, strong reputations among their peers for competence and integrity, and the ability to communicate effectively with nonscientists. We are not recruiting individuals who have frequently served as partisan expert witnesses. Registrants are required to make a written professional commitment to adhere to a code of conduct, designed to ensure public confidence in their integrity and impartiality. Prior to a registrant's referral in a particular case, we require full disclosure of funding sources and other personal and financial interests, so that the user may determine whether a potential conflict of interest exists with respect to the particular proceeding.

The quality of our registrants is very high. The medical experts we have recruited so far are at the top of their disciplines. Many are or have been department chairs at major medical schools. Many have held leadership positions in the most selective organizations in their fields. A number are in the Institute of Medicine. Our environmental experts are similarly of high quality. In short, we will provide independent experts whose advice is worth listening to.

For some time, of course, we will not have registrants with the particular expertise needed for each case in which an independent advisor may be sought. In those cases, we are prepared to conduct targeted searches to identify individuals with the appropriate qualifications and with the same high quality as those already on the registry. With the resources of our reference libraries, and with networks of deans and other leaders who have agreed to assist us in identifying top-quality scientists with particular qualifications, we can respond promptly to requests for services in virtually any field of science or technology.

Requests for Services; Nature of Services; Fees and Compensation

Registry services may be requested by mail, telephone, fax or e-mail to:

Corinne A. Houpt, Registry Co-Director
Private Adjudication Center
110 Swift Avenue, Suite Two
Durham, North Carolina 27705
Telephone (919) 416-3722 or 1 (800) DUKE-PAC
Facsimile (919) 416-3218
e-mail: choupt@law.duke.edu

The Center will handle all arrangements for nominating registrants with appropriate qualifications within the user's required time frame, facilitating communication as necessary, collecting the fee for the service, and remitting payment to the registrants.

The standard service provided by a registrant is a written opinion or report responding to one or more specific scientific or technical questions. However, we will work with potential users if other services are requested, such as providing background information on scientific or technical issues or participating personally or by telephone in mediation sessions.

It is important to note that the scientific issues in many cases may be uncertain or controversial, and reputable scientists' views will not always be uniform. The registrant's role is not to provide a definite answer but rather to explain the current state of the relevant scientific knowledge, including areas of disagreement and those where existing data are insufficient to permit clear conclusions. Indeed, one of the advantages of independent scientific advisors is their freedom from the pressure that partisan experts often feel to overstate the certainty of their scientific opinions.

Fees are generally charged to users of the registry, and compensation is paid to registrants in accordance with schedules set by the registry. Registrants are compensated at an hourly rate, designed to provide reasonable reimbursement for their time, consistent with the public nature of their services. An additional administrative fee is charged for the costs of administration of the registry. Because of our grant, we have some flexibility to reduce or even waive fees in some cases during the start-up period.

Personnel

The co-directors of the registry are Corinne Houpt and Michael Zimmerman. Ms. Houpt is an attorney with more than 20 years experience as a university counsel, first at Duke University and then at Mercer University in Georgia. At both institutions, she worked extensively with scientific and technological matters. Judge Zimmerman, who recently stepped down as Chief Justice of the Supreme Court of Utah, has joined the registry as co-director on a part-time basis. He also has had significant experience with scientific issues, and he is now serving as a mediator in environmental cases, among others.

Professors Paul Carrington and Francis McGovern of the Duke Law School and Professor John Conley of the University of North Carolina Law School are actively involved in the registry and available for advice and consultation as needed. Professor Carrington is an expert on civil procedure and active in judicial law reform efforts. Professor McGovern has served as a neutral expert or court-appointed special master in a number of significant mass claim cases. Professor Conley, who also holds a Ph.D. in Anthropology, has taught and written extensively on scientific evidence; he directs the Center's annual judicial education program, Judging Science.

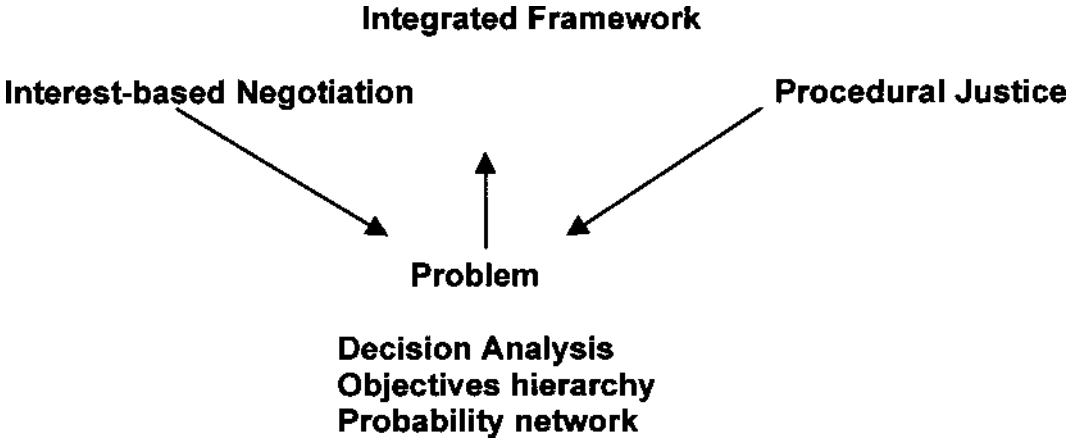
The registry's Advisory Council consists of the following distinguished individuals:

Dr. William Anlyan (former Chancellor for Health Affairs, Duke University)
Barbara Babcock (Professor of Law, Stanford; former Assistant Attorney General)
Dr. Stuart Bondurant (former Dean, School of Medicine, University of North Carolina)
Scott Brewer (Professor of Law, Harvard University)
Robert Burt (Professor of Law, Yale University)
Hon. Stephen Breyer (Associate Justice, United States Supreme Court)
Paul Carrington (Professor of Law, former Dean, Duke University; Center Board Chair)
Julius Chambers (President, North Carolina Central University)
Thomas Ehrlich (President Emeritus, Indiana U; Distinguished Scholar, Cal State)
Samuel Gross (Professor of Law, former Dean, University of Michigan)
Paul Hardin (former Chancellor, University of North Carolina-Chapel Hill)
Sheila Jasanoff (Professor, Kennedy School of Government, Harvard University)
Donald Kennedy (former FDA Commissioner; former President, Stanford University)
Dr. William Roper (Dean, UNC School of Public Health; former CDC Director)
Dr. Charles Sanders (former CEO, Glaxo Wellcome)
Robert Timmins (former CEO, Organon Teknika)

Public Values, Technical Analysis, and Procedural Justice in Environmental Conflicts

By Lynn A. Maguire, Nicholas School of the Environment, Duke University

Why are environmental disputes so hard?
- Many parties, many goals
- Public values
- Technical uncertainty
- Political process



Neuse Watershed in North Carolina

Facts about the Neuse River
- 3rd largest river basin in North Carolina (6,234 mi2)
- 200 miles long, 300 stream miles
- 1.5 million people in basin, mostly near headwaters

Water quality degradation in the Neuse River estuary
- Excessive algal blooms
- Low dissolved oxygen
- Massive fish kills
- Outbreaks of toxic microorganisms
- → 30% nitrogen load reduction

Management options
- Vegetative stream buffers
- Point source nitrogen load reductions
- Agricultural BMPs
- Urban stormwater treatment
- Improvement in waste management for animal agriculture

ModMon
- Modeling effects of management actions on estuary
- Monitoring actual effects of management action (or inaction)

Decision analytic approach
- Elicit stakeholder concerns
- Develop a probabilistic model to link proposed actions to concerns
- Evaluate alternative management strategies

Public participation
- Initial letters/survey (55 out of 240)
- Four public meetings (29)
- Feedback on meetings
- Written survey (27)
- Telephone interviews (23)
- Personal interviews (9)
- Ongoing stakeholder advisory group

Objectives hierarchy
- Ends—measures
- Means
- Process
  —Public involvement
  —Modeling
  —Cleanup

A probability network is a graphical model that expresses the relationships among the important variables in a system.

Means (ex.)
- Control sediment to tributaries
- Control timing of peak flows
- Control growth upstream through urban planning
- Control overfishing
- Permit nutrient trading

Process objectives—modeling
- Characteristics (ex.)
  —Appropriate spatial resolution
  —Cumulative effects
  —Historical data
  —Credible
- Capabilities
  —Compare management plans in a timely fashion
- Predict duration and magnitude of hypoxia
- Support adaptive management

Process objectives—public involvement
- Two-way exchange
- Repeated participation
- Evidence that input is used
- Realistic public expectations
- Reduced conflict
- Participation in cleanup

Process objectives—cleanup
- Efficient (most cleanup for money spent)
- Fair allocation of responsibility
- Acceptance of responsibility
- Upstream/downstream commitment
- Straightforward implementation and enforcement

Decision analysis and interest-based negotiation
- Ends/means objectives = interests/positions
- Measures—make connection between interests and technical analysis
- Model
  —Joint fact-finding
  —Commonly accepted standard

Procedural justice
- Voice
- Fair—authorities, other parties

- Respectful—authorities, other parties
- Unbiased authorities
- Responsive to information
- Correctable

Public values and technical analysis
- Probability network model big improvement over original
- But, ModMon narrowly focused on biophysical goals, not social
- Spatial scale—not whole watershed

Political/legal process
- Lawsuit over TMDLs—original model may be used to set these limits
- Timing of probability network results and regulatory decisions?
- Legislative override?

Acknowledgments
- Nicholas School of the Environment
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The Framing of Intractable Natural Resource Disputes and Their Implications for ADR Practice

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Barbara Gray, Center for Research in Conflict and Negotiation, Pennsylvania State University

Panelists

Ralph Hanke, Pennsylvania State University

Julia Wondolleck, University of Michigan

Todd Bryan, University of Michigan

Guy Burgess, University of Colorado

Panel Abstract

This panel presents research findings on the framing of intractable natural resource disputes and their implications for ADR practice. The panel is presented by members of the interuniversity Consortium on the Framing of Intractable Environmental Disputes and looks at an interesting, “mixed bag” of natural resource disputes, including Voyageur’s National Park, the Quincy Library Group, and Colorado Growth Management. The research is based on interviews, participant observation, and document analysis, and explores common frames in natural resource disputes, patterns in the way frames are evoked, the dynamic nature of framing, and framing training. The panel will focus on understanding the underlying meaning of frames and framing, and how changing frames has the potential to transform intractable disputes. The panel will involve participants in a discussion of framing and how it can be understood, influenced, and managed in the ADR process. The interuniversity Consortium is an interdisciplinary research group from management, planning, and natural resource programs throughout the U.S.

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Organizational Strategy for Conflict and Conflict Resolution

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Bryce Appleton, Tucson, AZ

Panelists

Larry Allen, Malpai Borderlands Group, NM

Carl Moore, The Community Store, Santa Fe, NM

Gregg Walker, Oregon State University, Corvallis, OR

Panel Abstract

Panelists will present views on the role of strategy in an organization's ability to manage what conflicts it gets involved in, how to resolve them, and how to emerge from conflicts in ways that support its overall purposes. Examples of various strategies will be spotlighted to evaluate their effects. Participants are invited to give examples of organizational strategies and how they contribute to an organization's effectiveness in dealing with conflict. There will be discussion of the utility of strategies for conflict, how organizations can formulate such strategies, how the strategy is manifested in an organization's activities, and what results derive from such strategy.

Individual Papers

Corporate Strategies For Natural Resource Dispute Resolution: Comparison of a Federal Agency and a Nonprofit Collaborative Planning Group
By Larry S. Allen

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Corporate Strategies for Natural Resource Dispute Resolution: Comparison of a Federal Agency and a Nonprofit Collaborative Planning Group

By Larry S. Allen, Malpai Borderlands Group

The U.S. Forest Service

A forty-four year career with the Forest Service provides an insiders perspective, while at the same time giving insight into the weaknesses of the federal approach to conflict management. Over the years the Forest Service has experienced the evolving art of "information and education," "inform and involve," public participation; and conflict resolution. Employees experienced opportunities to interact with extractive industry groups such as the timber, mining, and livestock industries; and with forest recreationists and concerned environmentalists.

The Malpai Borderlands Group

For the last five years of my Forest Service career I was the agency coordinator with the Malpai Borderlands Group. Since March of 2000 I have been a member of the Malpai Board of Directors. This experience has provided exposure to planning and conflict resolution in the private sector and the perspectives of a group seeking a new way to deal with the many contentious issues of natural resource management.

Evolution of the Forest Service Approach

The Forest Service was created at the turn of the last century to provide leadership in natural resource management in an era of growing public concern about overharvest of the nations forests and disastrous forest fires. A small cadre of dedicated professional foresters quickly established a system of national forests, brought timber harvest under control and began to suppress forest fires on government managed lands.

Management by experts: Several factors contributed to the early success of the agency. Of particular significance was the strong leadership from Chief Gifford Pinchot and a unanimous internal agreement as to the purpose of the fledgling agency. Everyone involved strongly supported Pinchot in his "wise use" definition of conservation and the evolving concept of "multiple use." Another significant factor was strong personal support from President Theodore Roosevelt and Secretary of Agriculture Wilson.

Allocation of resources among competing uses was predictably contentious and the agency experienced conflict from the onset of management. However, the professionalism, dedication and unified purpose of early foresters resulted in a great deal of public confidence in the agency. The principle of "the greatest good for the greatest number in the long run" guided every decision. Employees of the agency were renowned for their "can do" attitude and team spirit. Decisions were vociferously debated, then supported

by employees. Individuals who did not agree with specific decisions of the agency still perceived that the foresters were fair, impartial, and competent. Few Americans questioned the expertise or objectivity of Forest Service employees and most decisions under this system were scientifically based and in the best interest of the land. One notable exception was the misguided belief that every forest fire should be suppressed immediately in spite of fuel and weather factors.

This model of decision making and conflict resolution served the agency and the national forests well until about World War II.

Congressional targets: After the war Congress began to take a more "hands on" approach to natural resource management. This was in response to constituent's demands for more commodity uses of the national forests. With limited input from the professional foresters Congress began to assign targets in the budget process for such things as board feet of timber, animal months of grazing, etc. The Multiple Use—Sustained Yield Act validated the long held philosophy of the Forest Service, while recognizing *wood, water, forage, wildlife and fish, and recreation* as appropriate multiple uses. Other commodity-oriented laws such as the Public Rangelands Improvement Act, passed during this era.

The agency responded to these targets with their traditional "can do" attitude and significantly increased harvest of renewable natural resources. In an attempt to improve the budget of the Forest Service, many administrators began to propose to Congress that increases in budget would result in increases in commodity output. Many unrealistic proposals resulted from the Resource Planning Act, which required the agency to report once a decade on the ability of wild lands of the U.S. to produce commodities and on the budget needs of the service. On-the-ground foresters and range conservationists began to question if the increased commodity targets were sustainable.

Environmental backlash: Unrealistic commodity targets resulted in overharvest and created the need for questionable cultural activities such as terracing steep slopes. A great public outcry against these practices focused on the Bitterroot Mountains of Montana and the Monongahela National Forest of Virginia. The result was a rash of legislation designed to protect the environment from such excesses. These new laws included the National Forest Management Act (which called for Land Management Plans and placed restrictions on certain practices such as clear cutting), the National Environmental Policy Act (which included a requirement for public participation in decision making), the Endangered Species Act (which required consultation with another federal agency), the Antiquities Act, and the Freedom of Information Act. All of these laws strengthen the rights of Americans to a participative planning process. The foresters, who shared the public's concerns for environmental impacts, were frustrated and dismayed with the public perception that these laws were needed to protect the forests from the foresters.

Gridlock: The modern Forest Service has become mired in the endless processes of these overlapping laws. Skilled opponents of the harvest of renewable resources have used these complex processes to prevent any management actions by the agency.

Commodity users are learning from the successes of the preservationists and understanding that they too can use the process for their ends. At the same time the agency is undergoing significant philosophical changes and there is little internal agreement as to the mission.

Forest Service Corporate Strategies

The Forest Service has attempted several strategies for public involvement and conflict resolution as follows:

A. Information and education—Pinchot helped early foresters understand that a governmental agency can only accomplish what the public will permit. At a time when most forestry expertise was within the agency and the public had a great deal of trust the strategy was to keep the public informed and to educate them when they didn't understand the issues. This was a successful strategy in a simpler, more trusting time.

B. Inform and involve—The information and education strategy evolved into a more participative one of informing and involving the public in the decision-making process. Appeals processes were streamlined and the public was made aware of their right to appeal any decision of a forest officer. The agency put a great deal of effort into insuring that the appeals process was fair and objective.

C. Public Participation—Current environmental laws require a more formalized approach to public participation in the decision making process. The public must be heard and this participation must be documented. Many employees had the misconception that massive public meetings were required. This is often the worst possible way to communicate with the public. Some common misuses of the process included:

1. Snow the public—Use a supposedly neutral facilitator with lots of flip chart paper to wear folks down with endless lists and brainstorming. Take a week or two to "process the input" and announce a decision.

2. Divide and conquer—Use a technique similar to the snow job, but include small focus groups for the purpose of imposing a predetermined decision on the community in smaller pieces.

3. Interdisciplinary teams—Use the ID teams, which are required by several of the environmental laws as a public relations tool by appointing representatives of the diverse factions to the team. This results in everyone feeling a part of the team, and a near endless process.

4. Dueling experts—Bring in a "hired gun" to convince the opposition and the general public that the agency position is supported by the facts.

5. Bring in a manager—Assign management of a controversial situation to an employee with few or no other duties, so that he can concentrate on working through

the issues. Although often a sound management decision, this strategy will not work if the individual is not given the time and resources to gain the confidence of the diverse publics.

6. Management from above—Abdicate management to politicians inside the Beltway. Blame all controversial decisions on the politicians, and/or lawyers. This will never satisfy the local constituency, but will take some of the heat off of local managers.

7. Crisis Management—Wait for a crisis to develop and then flail about in search of a solution. The advantage of this method is that some issues never become a crisis and therefore don't require action.

D. Sincere up front public involvement—Involve all factions of the public early and often. Seek input at the early planning stages and sincerely consider resulting suggestions. This strategy is currently in vogue by the Forest Service. By time to announce a decision most participants feel that their concerns have been heard and addressed. Most decisions are modified in response to public input. This strategy is most likely to result in an acceptable decision, if done one on one or in small groups.

Need to be Proactive

Regardless of the strategy selected, there is a real need for the Forest Service and other public agencies to get ahead of the issues in a proactive manner. This is difficult to do, due to the press of urgent business, but it will result in great savings of time and work in the long run.

The Malpai Borderlands Group Approach

In the early 1990s a group of neighbors began to meet at Malpai Ranch to discuss mutual concerns about societal changes and perceived threats to their livelihood and lifestyles. These ranchers were surrounded by nearly one million acres of undisturbed open space, which they wished to preserve from subdivision and other threats to their way of life. They were concerned that urban citizens were becoming increasingly militant toward perceived impacts of grazing on the environment. This is a frightening trend to the ranchers who realize that they are vastly outnumbered in our modern society. Another area of concern was the need to reestablish fire as an ecological force on the rangeland.

The Malpai Group invited some prominent environmentalists to meet with them and was pleasantly surprised to discover many areas of mutual concern. This was the beginning of a coalition between these ranchers and the environmental community in support of collaborative planning for the region. Certain individuals from The Nature Conservancy and public land agencies were a part of the coalition from the start.

The Malpai Borderlands Group was incorporated as a nonprofit corporation with the following goal statement:

> Our goal is to restore and maintain the natural processes that create and protect a healthy, unfragmented landscape to support a diverse, flourishing community of human, plant and animal life in our Borderlands Region.
>
> Together we will accomplish this by working to encourage profitable ranching and other traditional livelihoods which will sustain the open space nature of our land for generations to come.

This statement of purpose was crafted with input from neighbors, government agencies, and environmentalists. A unique characteristic of the group is the lack of any personal agendas. Everyone in the group is supportive of the objectives of the group. It is often said, “It is amazing what you can accomplish, if nobody cares who gets the credit.”

The Malpai Borderlands Group Strategy

The Malpai Borderlands Group pursues a strategy of preventing controversy as much as possible, rather than dealing with it after the fact. This multifaceted strategy includes the following elements:

A. Clearly define objectives.
B. Always respect all opinions.
C. Seek out critics. Sit down with them and seek common ground.
D. Pursue the concept of “a radical center.”
E. Base all natural resource decisions on the best available science. Make all research results widely available.
F. Maintain an open, honest process.
G. Use a variety of media including national magazines, television, and local newspapers, as well as community meetings and field trips to keep the story of the Malpai effort before the public. Tailor publicity efforts to a diverse audience.

The Malpai Borderlands Group has experienced a great deal of success with this approach and is nationally recognized as an example of successful collaborative planning. Other groups would need to tailor the approach to specific local situations, but the general principles would apply anywhere.

Africa, South America, Mexico, and the United States: Global ADR Realities

Thursday, May 18, 2000—10:15-11:45 a.m.

Moderator

Alice Shorett, Triangle Associates, Seattle, WA

Panelists

Tommie Martin, Double Check Ranch

Jean Schwennesen, Double Check Ranch

Lois Schwennesen, Triangle Associates, Seattle, WA

Panel Abstract

This panel will lead a discussion on the common denominators of effective ADR across the globe: lessons learned in Somalia, Bolivia, Mexico, the southwestern United States, and the Pacific Northwest. Panelists will dissect how certain dispute resolution techniques can adapt to the people and culture as well as to the specific environmental conditions of varied project sites. The panelists will use their substantial experience to address crucial ADR skills that have proven themselves across the globe and cultures, techniques created on the spot to respond to unique issues, approaches that travel well from area to area, and disasters created when ADR techniques are not adapted to the community.

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SESSION V

THURSDAY, MAY 18, 2000
1:30–3:30 P.M.

Taking a Risk: Tribal Participation in ADR Processes

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Lucy Moore, Lucy Moore Associates, Inc., Santa Fe, NM

Panelists

Michael Benson, Navajo Water Resources Department

Les Ramirez, Office of Les W. Ramirez, Esq.

Blane Sanchez, All Indian Pueblo Council

Roland Shanks, Alaska Inter-tribal Council

Panel Abstract

Although many government entities see collaborative and ADR processes as an opportunity to avoid litigation and create sound solutions, tribal governments often hold a different view. Because of their unique status as sovereign nations, their history with federal and state agencies, their relationships with neighboring communities, and their own cultural requirements, they may evaluate the collaborative process offered by the non-Indian parties as inappropriate. In this session, three tribal representatives will offer their thoughts on tribal participation in ADR processes—the pros and the cons—using specific case examples from their own experience. Cases will include issues of water rights and planning, endangered species, and toxic cleanup. This will be a rare opportunity for practitioners and participants to hear honest reflections on the applicability of collaborative and ADR processes to individual tribal communities. Those attending should gain better understanding of how to work more successfully with tribal governments and communities.

Panel Summary

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Summary of Presentations and Discussion

By Lucy Moore, Lucy Moore Associates, Inc., Santa Fe, NM

Introduction

Lucy Moore welcomed the audience and thanked the panelists for giving their time and their thoughts to create this session. As a mediator/facilitator with experience in Indian country, Lucy reflected on the unique position of tribes in ADR processes, and the care with which they must decide whether or not to participate. They must consider their status as sovereign nations, their history with federal and state agencies, their relationships with neighboring communities, and their own cultural requirements. She has learned to listen carefully to messages from Native American communities about ADR processes, and believes that the field has much to learn from these potential participants.

Roland Shanks

Roland explained that he is not a Native American and that he was not speaking on behalf of the tribes that employ him. He drew from his many years of experience working with and for tribes, and from his academic studies, to speak about the importance of values in the relationships between people. He offered a theoretical basis for understanding communication between people of different cultures. Culture, he said, generates values, beliefs and attitudes, and each of us is the sum of all our experiences. These beliefs and experiences will be expressed by each of us in our language, our clothing, and in dozens of other ways. We have all experienced miscommunications with a person of another culture and wondered what went wrong. It is important to realize that the depth of our culture and the sum of our experiences can create in us very different points of view and understandings of the world around us. A non-Native environmentalist may believe he is sensitive to the natural world and the needs of species when he fishes catch-and-release style. A tribal person may feel this is not in keeping with a natural way, and that in fact it is “playing with your food.” A federal bureaucratic culture may emphasize written communications, MOUs and MOAs, and be frustrated at the lack of response from tribal leadership, for whom the spoken word and personal contact is more important. Tribes may see ADR as a way of bridging some of these gaps.

Les Ramirez

An attorney representing several Native American communities, Les reflected on his work with the Santa Ana Pueblo on the Rio Grande in New Mexico. He made it clear that he speaks today with permission from, and on behalf of, that Pueblo.

Les identified leadership and language as two key themes in the Santa Ana approach to a collaborative process concerning the protection of the Rio Grande Silvery Minnow. This endangered species is not found in the six miles of river which runs through Santa Ana Pueblo, and the pueblo is under no obligation to participate in efforts to save the minnow. However, the tribe’s relationship with the natural world dictates a concern for the species, and the tribal council accordingly took action to help save the minnow.

Losing the species, he explained, would be like losing their language. The pueblo has taken a leadership role, and is developing an ecosystem restoration project which will create new habitat for the Silvery Minnow. With federal partners—Bureau of Reclamation, Army Corps of Engineers, Bureau of Indian Affairs, and Fish and Wildlife Service—the pueblo has generated some creative funding mechanisms for the project and hopes to introduce the minnow into the restored habitat in the next few years.

Les described two distinct concepts of language which are key to understanding the tribal role in collaborative processes. In the technocratic world, we see scientific data as objective and relational data as romantic. For the Pueblo of Santa Ana, it was important to remember and honor the connection between the two concepts—the objectivism and the idealism. The Pueblo sees itself, he explained, as part of the cycle, rather than an agent controlling it, and this gives the tribal community a special view of endangered species. The Silvery Minnow is more than biological data; a relationship exists between the species and the community.

There are risks to taking this leadership role. It is imperative that the minnow, which has this special relationship to the tribe, survive once it is transported to Santa Ana habitat. It is always critical to protect tribal sovereignty, and there are risks that an ADR process may pose a threat to sovereignty. Les also suggested that tribal communities may be wary of ADR processes which use certain language. The Pueblo of Santa Ana is concerned that the documents which they would need to sign to join a basin-wide habitat conservation planning process contain words like “must” and “shall.” For the pueblo these words mean forever, but they recognized that for the non-Indian partners these words may include concepts on modification and amendment. The use of words, particularly verbs, will be very important to tribes in deciding whether or not to participate.

Blane Sanchez

Blane wanted the group to know that his remarks would be his own personal opinion and not representative of either his employer the All Indian Pueblo Council, or the Pueblo of Isleta. He described for the group the efforts of Isleta Pueblo to protect the water quality in the Rio Grande from upstream polluters, particularly the City of Albuquerque. The Pueblo established their own water quality standards in 1992, under the Indian Amendments to the Clean Water Act—standards which Albuquerque protested as being the basis for the renewal of an NPDES permit for their wastewater treatment plant. The 76 million gallon per day that flows from the plant make it the fifth largest tributary of the Rio Grande in New Mexico. The councils from both the city and the pueblo met in an effort to reconcile their differences, particularly the arsenic standard. Before these meetings were complete, the city sued EPA over the issue. As this suit moved through the courts, it set important precedents for tribal authority to set water quality standards, even with respect to dischargers off reservation land.

In order to resolve the permit questions as quickly as possible, the city agreed to negotiate with the tribe, the pueblo, the state and EPA agreed to approach the city collectively to propose a compromise to the NPDES permit discharge limits. The eventual permit discharge limits agreed upon for arsenic did not reflect the pueblo’s water quality standard, but it was a satisfactory resolution.

The pueblo's incentive to participate was to gain an improvement in the quality of the river and establish the tribe's authority to set standards. The risk was that a precedent might be set which would be damaging for Isleta and for the other pueblos along the Rio Grande. Blane feels that the collaborative process was worth it, because the quality of the flow through tribal lands has been improved, and the resolution was more efficient and less costly than a litigation-driven one. He has concerns, however, because the settlement was temporary, covering the term of the renewed NPDES permit only, which again would have to be revisited at the end of four years. Also, he regrets that the NPDES permit discharge limit for arsenic was not set at naturally occurring background levels which would have better supported the interests of the pueblo.

Blane offered advice to other parties participating in similar collaborative processes with tribal governments. Federal agencies should remember the trust responsibility and include tribal interests in their own agendas; don't be afraid of political implications. State agencies should recognize tribal sovereignty and the need to deal on a government-to-government basis with tribes. Local governments should not sensationalize conflicts with tribes. The city in this case seemed to put the blame for wastewater plant expenditures on the pueblo, saying that they were forcing the city to spend $250 million to meet their standards, when the real figure was closer to $60 million, much of which was necessary to be in compliance regardless of the Isleta standards. The use of inflammatory language and figures can damage any spirit of neighborliness between Indians and non-Indians. And for facilitators and mediators, he urged an awareness of the issues, a familiarity with the setting, and a sensitivity to the limits of your involvement; be careful not to interfere in, or impact, other issues not directly related to the case at hand.

Michael Benson

Michael spoke about two collaborative efforts that he is in involved in on behalf of the Navajo Nation. The first is a series of informal discussions with the state of New Mexico on water rights in the San Juan Basin. These talks, Michael believes, grew out of another collaborative process, the New Mexico Water Dialogue, which brings together entities and interests to talk about the water future in the state and support each other's planning efforts. This experience enabled the participants to become comfortable with each other, and set the stage for the water rights talks which are underway now. In addition, the regional water planning process, mandated by the state, has provided a forum for parties to get to know each other. The water rights talks between the state and the Navajo Nation required a facilitator, who is paid by a private foundation in New Mexico interested in supporting collaborative ways of resolving water disputes.

The second collaborative effort involves a plan to provide drinking water to a large portion of the Navajo Nation which is without running water, as well as to the city of Gallup, a growing urban area off the reservation. This is a project which could produce a lot of hostility between Indian and non-Indian residents of the area, as the two compete for the water. And another water supply project, the Animas-La Plata project in southwestern Colorado, has in fact been a magnet for a great deal of negative feelings and racism. The hearings for the Navajo-Gallup pipeline, however, were much calmer.

Navajo staff and Gallup staff had spent time and energy communicating with each other, and had developed a set of relationships that helped ease the politicians into the discussions when the time came.

Michael believes that communication before a dispute is defined is crucial in the resolution of differences. A facilitator can be a great help in this process, particularly if there is racism and lack of respect for tribal government. Some of the bias and discrimination is just that, and some of it is the result of ignorance. We must learn about each other, he said, and communicate to undo those stereotypes. Facilitators and facilitated processes can help bring people together in informal settings to increase this mutual understanding.

Michael hopes that facilitators will also realize some truths about the Native American situation today. Non-Indians often seem to assume that tribal people and governments "will go away," that they are somehow relics of the past. The power is stacked against tribes, in his opinion, and this imbalance needs to be understood and addressed in any collaborative process. In addition, there is an irony in asking tribes to participate in a collaborative process, now that so many of the resources are gone. It may seem to a tribe that non-Indians are asking them to share, now that there is very little left.

Discussion with the Audience

Insuring proper communication: When English may not be the first language for a tribal person, and the subject matter of discussions with a government agency might be complex and foreign, how can we bureaucrats be sure that we are communicating clearly?

Panelists: Remember that everyone is approachable. Although there are differences in clothing, looks, language, etc., among us, let's not blow them out of proportion. Even a traditional Navajo, who knows very little English, can observe a discussion among bureaucrats and understand what is going on. It is good to be aware of differences, but it is a mistake to view Indian people as "coming from Mars."

First comes the relationship, and communication will follow. It is crucial to speak from the heart to each other, and the understanding will follow.

Familiarity with the language: An administrative law judge emphasized the importance of working with a good interpreter, and going beyond that to learn something about the Native language yourself. Even if you cannot speak it, you will have a better understanding of their culture and world view. Practice, learn, and listen.

Panelists: Remember that a translation of one word into another language may not result in the translation of the concept.

Nature of agreements: Do tribes want a flexible or rigid agreement?

Panelists: Sometimes when an acceptable agreement reaches a tribe, they are so eager for it to be final and to produce a real benefit, that they will jump at it prematurely. Tribal leaders, like any leaders, want to be able to say that they have done something good for the tribe. A tribal attorney, however, may be wary not to foreclose the chance of realizing a greater future benefit, if it is out there to be had. He/she may not want the tribe to be bound too tight, and not be able to maximize benefits later on.

Styles of negotiation: An experience with a Chippewa Band led a participant to ask how a collaborative process can be sensitive to a different negotiation style? How can the process accommodate different negotiation styles?

Panelists: Tribes usually send someone to negotiate who is familiar with, and comfortable with, an Anglo style of negotiation.

It is important for a tribal government being invited into a process that the tribe understand fully the nature of the ADR process, its limits and its potential. Each process and each tribe will be different, so the understanding and coming to agreement about the nature of the ADR process will be an individual one.

Be sure not to generalize about tribes. The style of this Chippewa Band may be similar to, or very different from, other tribes.

In the case of Santa Ana Pueblo, tribal negotiators are chosen for their ability to deal with non-Indian processes and also for their civility. If these representatives are displeased, insulted or sense hostility will erupt, they will not compete and argue, but will simply walk out, and probably not return. This has served a protective purpose in the past, and it demonstrates a maturity, grace, and patience, in the face of demeaning behavior. It is not rude, just a response to a situation which may get out of hand, and indication of a decision to remove themselves from the conversation.

Consultation with tribes: A National Park Service participant spoke of her gratitude to tribal leadership when they corrected her process errors, like forgetting to begin with a blessing. She appreciated that patience and good humor, and wondered if it becomes tiring to educate the non-Indian world. She also asked if consultation and notice should be given differently to tribes, or could they be treated like other stakeholders? Another participant asked how the federal government could “do better” in communicating with tribes, given the enormous range of capacity and sophistication among tribes.

Panelists: One-on-one consultations are necessary between each tribe and the agency, particularly when issues of culture are involved. The secrecy of cultural information will require a conversation with the tribe that may be quite different from a standard form of consultation.

The turnover of agency staff can be very detrimental to a good working relationship between a tribe and an agency. The importance of the personal relationship and the development of trust between two people means that the potential for collaboration will be hurt by the transfer of a key person.

Federal agencies are often not funded to a level necessary for them to perform their fiduciary responsibility for tribes, and no matter how sincere and committed the agency staff person might be, he/she is unable to relate to tribes in the best way. Even the smallest tribes must have the best representation when dealing with federal grants and contracts. If there is a dispute and they lose a contract or grant, the result can be economically devastating. All tribes, but particularly the smaller ones, need good counsel and a fair process, because for them the stakes are very high.

If the agency is frustrated by the lack of response from a tribe or finds it difficult to communicate, it may be important to find the right person in the tribal government, or even outside it. There is no substitute for visiting the tribe, making a connection with someone, or learning from the experiences of other agency people who work with the same tribe.

Some Points to Remember

These points are drawn from a conversation among panelists prior to the presentation, and compiled by the moderator, Lucy Moore. What follows does not represent agreement among the panelists, but points raised and offered for further discussion.

Do not generalize about Indian country—What worked one place may not work in another. Don't be tempted to assume that you know about "Indian culture," no matter how many experiences you have had. Furthermore, what worked in one period for a tribe may not be appropriate now. Times change, priorities change, leadership changes. Litigation may have been a preferred way of resolving disputes a decade or two ago. Today, some tribes may see ADR processes as more fruitful.

There are incentives for tribes to participate in ADR processes—Some tribes believe ADR can offer important benefits.

- Some see court decisions less likely to be in favor of tribes than they used to be. Going to court may be a risk for some tribes, where much can be lost.
- ADR may produce a speedier solution, and in the case of natural resources, it is in the interest of tribes to settle water rights, for instance, sooner rather than later. Waiting only allows for more non-Indian development and less resource to share.
- Tribes are interested in solving the bigger problems that can be handled in an ADR processes—like resource management issues. Resolving a single dispute is only a part of a bigger puzzle.
- ADR can be a good forum for planning. Regulatory pieces of the puzzle, like ESA, Section 7 consultation, EIS's, and adjudications, can be dealt with in a voluntary ADR planning context where all interests are included.
- It is in the interest of tribes to develop comfortable working relationships with non-Indian entities and governments. We are all here to stay.

Tribes may be interested in ADR as a way of changing the status quo—Many tribes are interested in changing the old way of doing business and see ADR as a vehicle for those changes. ADR may facilitate movement from the adversarial to consensus-based

decision making. ADR may promote planning, over an ad hoc, accidental-style development. And, the use of an ADR process can replace uncertainty with a more certain and comprehensive picture of the future.

Sovereignty of each tribe must be understood by others and not compromised by the ADR process—This may be the first hurdle for an ADR process, and it will determine whether or not a tribe considers participation. Participation in a state process is often rejected automatically for fear that the sovereignty of the tribe will be compromised if the tribe subjects itself to state jurisdiction. If a tribe chooses to participate in any process created by another government entity or group of entities, it must do so with great care. A tribe may be interested in participating in a process which is designed to develop a scheme for the management of natural resources, if it is given a full seat at the table where decisions are made. A tribe may reject the offer to be a member or a subscriber to a state process.

Sovereignty raises two questions:
- How will this process impact the tribe's sovereignty?
- How can the tribe participate as a sovereign and interact with others?

Dilemma: How can a tribe participate in a consensus-building process without compromising sovereignty? Are there differences between tribal sovereignty and that of a state or the United States? Are there protections that can be built into the processes?

Decision making within each tribe will determine participation—It is important to understand that the decision-making process within each tribe is different, and that the criteria for participation will be different. Each tribe has its own system for the delegation of authority to speak for the tribe. The spokesperson will vary depending on each tribe's governing system and each tribe's priorities.

Dilemma: How can a mediator determine the authority of the representative without interfering in private cultural matters? Does it matter?

Disclosing information can be risky—Tribes may be sensitive about revealing data and information which may later be used against them in court. This may be true for all participants, but for tribes there is an extra caution because of the need to protect sovereignty and cultural information.

Dilemma: How can a tribe protect information and participate fully in an ADR process? How can other participants be helped to understand, and work around, this problem? Are there ways to reveal, and protect, information at the same time?

Process must be clear—Because of the risks, the process must be clear from the beginning, and must not deviate without tribal concurrence. A tribe will be reluctant to enter a process that may change nature or direction, leaving the tribe in a position of having to withdraw. A tribe may also want certain limits on the process, and may walk away from a process that is too vague, or created by non-Indians.

Dilemma: How can non-Indians provide a process that is clear and structured, and yet not drive tribes away because it is created by non-Indians?

Each tribe has its own dispute resolution system—A tribal participant in ADR may bring with him/her assumptions or requirements based on that tribe's culture and traditional processes for resolving disputes. The ADR process may need to adjust itself to those cultural needs. Concepts like "neutrality," "objectivity," or religion-free may not be appropriate in tribal settings, or in processes that include some tribal people. A negotiation of ground rules, format and leadership of the ADR process may be necessary for comfortable tribal participation.

Dilemma: How can different cultural needs be accommodated in an ADR process? Are compromises possible, or does one culture need to "give in" to the other? Are there principles inherent in ADR that cannot or should not be negotiated?

Managing Social Conflicts Regarding 25 Percent of the World's Freshwater: Preserving the Great Lakes Ecosystem

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Susan Senecah, New York Coalition of Great Lakes Legislators, Albany, NY

Panelists

Kelly Burch, Pennsylvania Department of Environmental Protection

James G. Cantrill, Lake Superior Binational Program

Jack Manno, Great Lakes United

Panel Abstract

Managing conflict must often be proactive as well as reactive. This is especially true of transboundary and local issues facing the Great Lakes, a resource of global importance. One reason is that most of Canada's population lives on or near the Great Lakes, as does a sizable portion of the U.S. population. Another is that Great Lakes resource issues are particularly complex. For example, the special ecological problems facing management of the Great Lakes are, for the most part, intractable and not internally generated within the basin. From agency, legislative, and nongovernmental organization perspectives, the discussants will review the kinds of challenges inherent in managing the Great Lakes ecosystem. They will also present a number of processes underway from the local to international levels to pre-empt conflict and resolve existing conflict. Of particular value will be the "pit" discussion (with those attending the panel) to challenge existing and brainstorm new process structures and considerations to address thorny issues and situations. The panel members will take these ideas back to their agencies and organizations for serious consideration.

Individual Papers

Great Lakes Remedial Action Plans: To Restore, Protect, and Conserve
By Kelly A. Burch

The Great Lakes Water Quality Agreement: Conflict and Resolution
By Jack P. Manno

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Great Lakes Remedial Action Plans: To Restore, Protect, and Conserve

By Kelly A. Burch, Pennsylvania Department of Environmental Protection, Office of the Great Lakes

Remedial Action Plans (RAPs), formalized in the 1987 Protocol amending the Great Lakes Water Quality Agreement, are an iterative, action-planning process used to identify the responsibility and time frame for implementing remedial and preventive actions necessary to restore impaired beneficial uses in areas of concern. The original concept, formulated by the Great Lakes Water Quality Board in 1985, called for a staged reporting process which would: 1) identify the nature and extent of the problems; 2) select remedial measures to restore beneficial uses; and 3) report on the implementation of the remedial and regulatory measures, including a monitoring plan to ensure their effectiveness.

In theory, the RAP process, which includes the involvement of public advisory committees (PACs) to assist the lead agencies, was a broad departure from most historical pollution control efforts. In practice, however, the efforts have been slow in gaining significant environmental results. These shortcomings are due to the complexity of the problems, the high cost of the solutions, high public expectations, and a lack of available resources to implement corrective measures. In many areas, the RAPs failure to demonstrate progress has made it difficult to sustain public confidence and support.

The future of the RAP process remains uncertain in some areas. In order to achieve success, local community members must be educated about the problems and solutions in order to develop a collaborative vision for a healthy ecosystem. The environmental goals set forth by the citizens should be based on sound, defensible science in conjunction with community-based economic and social considerations. RAPs are a long-term process, and future emphasis needs to be placed on measuring and celebrating incremental progress along the road to success.

Kelly A. Burch, Pennsylvania Department of Environmental Protection, Office of the Great Lakes, 230 Chestnut Street, Meadville, PA 16335

The Great Lakes Water Quality Agreement: Conflict and Resolution

By Jack P. Manno, Executive Director, Great Lakes Research Consortium, President, Board of Directors, Great Lakes United

Background

- Boundary Waters Treaty
- Environmental crisis of the 1960s
- International Joint Commission

Structure as a conflict resolution model
- Groundbreaking agreement

Key issues in the Great Lakes
- Water quality
  —Nutrients
  —Toxics
- Water quantity
  —Diversions
  —Fluctuations
  —High and low water levels
- Management (resource, ecosystem, land use, etc.)

The role of science
- Increased understanding as a consensus-building process

The role of international organizations
- Creates an institutional structure within which a “epistemic community” can grow

The role of government
- As advocate for the public interest
- As source of resources

The role of industry
- As responsible party
- As protector of shareholder interests

The role of environmental advocates

The Role of Environmental Advocacy in Agreement

Principle 1: International agreements and treaties often articulate broad purposes and general goals attractive to environmental NGOs. Once adopted, such statements can be used by NGOs as international commitment to support for their issues. Once in the public domain, such agreements become more than simply creatures of the signatory governments; they belong to the class of documents like preambles to constitutions and declarations of independence which articulate a common vision and approach to politics and governance. Their power exceeds simple questions of implementation and enforcement. Even when they are not well implemented, perhaps especially when they are not well implemented, they can be strategically embraced and adopted by NGOs to mobilize public opinion, gain credibility, and pressure parties to adopt policies the NGOs support.

Principle 2: The technical complexity of many environmental issues creates a knowledge gap into which NGO representatives can move. Technical expertise and fluency developed by NGOs can lend credibility to their positions and provide important lever-

age in negotiations. What NGOs can do is to translate the technical issues into policy options, articulating their position on the environmental consequences of alternative policy choices. NGOs can make policy interpretations of science that scientists and government officials can not.

The 1999-2000 review of the Great Lakes Water Quality Agreement

- Reasons for review
- Argument for review
  - —A "comprehensive review" of Agreement operation and effectiveness is a requirement
  - —An assessment of current progress in ecosystem restoration/enhancement is necessary before an approach to achieving ultimate objectives can be determined
  - —Fundamental changes in governance, scientific knowledge and the state of the ecosystem have occurred since the last review, and must be assessed
  - —Only a comprehensive review can ensure that we are meeting our stewardship responsibilities in an efficient and cost-effective manner
  - —Options such as degree of revision should not be made until the review takes place.
- Argument against review
  - —No environmental benefit weighed against costs and risks
  - —No need to reopen agreement for basic upkeep, mechanisms exist within the agreement
  - —Existing commitments should be met before adding new ones
  - —Revisions risk placing whole agreement in jeopardy
  - —Change of administrations in U.S.
  - —Canada's weakening of "virtually elimination" concept
  - —Need to evaluate programs against agreement not agreement against programs
  - —Resources better spent on implementation plan for GLWQA

The process of influencing the revision decision

- The Coalition
  - —Great Lakes United, National Wildlife Federation, Sierra Club, Lake Michigan Federation, Canadian Environmental Law Association, Northeast-Midwest Institute
  - —Strategic interventions

Conflicts over meaning

- The Ecosystem Approach

Going Hog Wild: Using ADR Approaches to Resolve Disputes over CAFO Sitings

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Barbara Gray, Center for Research in Conflict and Negotiation, Pennsylvania State University

Panelist

Ralph Hanke, Center for Research in Conflict and Negotiation, Pennsylvania State University

Panel Abstract

The siting of concentrated animal feedlot operations (CAFOs) has generated very heated disputes in many states where agribusiness is already a way of life. CAFOs are farms in which large numbers of animals (typically hogs or chickens) are raised indoors at one location. Unlike other agribusiness operations, however, CAFOs have encountered considerable resistance from communities in which they are attempting to locate. Among other concerns, CAFOs may pose considerable environmental hazards for these communities, including threatening the quality of the surface water and groundwater, reducing the quantity of well water available, odor and insect problems, and increasing truck traffic and dust. In addition, efforts to site CAFOs often seriously rend the social fabric of rural communities. While small local farmers who may be struggling to survive can profit from CAFO operations (by serving as reception sites for the CAFOs excess manure), other community residents have NIMBY reactions to CAFOs, perceiving direct threats to the quality of life in their community. CAFOs are free to locate in most states if they meet the federal Clean Water Act standards as well as any state regulations that apply. Local communities, however, often feel helpless to address the problems that CAFOs pose while agribusiness owners often feel harassed by local communities who are protesting the siting of these facilities. The organizers of this session will provide brief scenarios of conflicts over CAFO sitings from our research and introduce several complicating factors that pose challenges for the use of ADR in these cases.

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Seeing Sprawl: Urban Growth Modeling in Two and Three Dimensions—Part I

Thursday, May 18, 2000—1:30-3:30 p.m.

Moderator

Wilson Orr, Sustainability and Global Change Program, Prescott College, Prescott, AZ

Panelists

Randy Gimblett, School of Renewable Natural Resources, The University of Arizona, Tucson, AZ

Hoyt Johnson, Sustainability and Global Change Program at Prescott College

Melaney Seacat, Pima Association of Governments, Tucson, AZ

Robert Wilkinson, University of California, Santa Barbara

Panel Abstract

Pressures on local/regional governments to “solve the sprawl problem” while maintaining continued economic growth have become as common as the solutions have become elusive. There is no simple resolution for this debate, and eventual compromise by the affected parties is the customary, and usually preferred, outcome. Anti-sprawl and smart growth advocacy groups compound the challenges with internal bickering over what’s smart and what’s not. Local and regional governments also find themselves at the brink as they work to balance short-term benefits and long-term consequences from current land use decisions. A crystal ball would help, but we don’t have one. NASA, however, is working to apply its space technologies to these very practical and pressing challenges. This program has developed integrated numerical, spatial, and three-dimensional models that generate a range of long-term urban growth scenarios resulting from a variety of growth and development policies. This capability permits communities to test a range of policies/development options to more effectively identify common ground among various interests. Since the models run to the year 2030, in real-time, and can incorporate extreme weather events, users generally begin to focus on long-term consequences to the broader community rather than quick returns for a minority interest. The benefits of this modeling technology as applied to growth scenarios in Gallatin County, Montana, will be summarized.

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Selecting, Contracting, and Mediating Disputes with Technical Professionals—A Practical Workshop

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Timothy Hoffman, Coolidge Wall Womsley & Lombard, Dayton, OH

Panelists

John L. Payne, Equitable Allocation Services LLC, Cincinnati, OH

Stephen F. Saunders, DPIC Companies, Norcross, GA

G. Van Velsor Wolf, Jr., Snell & Wilmer LLP, Phoenix, AZ

Panel Abstract

This panel represents attorneys, mediators, professional engineers, and liability insurance experts who have participated in both traditional litigation approaches in settling disputes and mediation sessions. They will present the key elements to help reduce the possibility for disputes in the first place, and if disputes arise, how the contract documents and the selection of the technical professional can clearly provide a direct access to ADR methods. They will provide detailed descriptions and examples of how to select the technical firm or professional for the project; adequately scope the technical project elements; establish roles of the owner and technical firm/professional; establish roles of counsel representing both parties; draft specific contract language, including major elements to be included on your standard contract forms; structure ADR provisions in contract; and review insurance provisions available in the marketplace as well as non-insurable provisions typically requested during contract negotiations.

Panel Summary

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Panel Summary

The following is a general outline that the panel will follow. We encourage audience participation and the moderator will frequently ask for questions or comments.

I. Selecting the technical firm or professional for the project.
   A. Comments from the panel

II. Technical scope development—how to do it (John Payne)
   A. Technical scope—developing with client should be an interactive process as both parties bring their ideas, experiences, and perspectives to the table. Something a client may want can't be delivered and they need to understand that. On most litigation cases where I serve as an expert witness or technical mediator, there is a disconnect as to: "What I wanted, what and when I got it, and what I paid for it."
      1. How to do this with a:
         a. New client: start from scratch—who are they, what is their business; what are their expectations for the assignment; which consultants they have used in the past, how they got your firm's name, etc. The goal is to determine what their expectations are, do they understand what they want as a project deliv erable, what are their schedule needs, and what is their cost sensitivity for what they are requesting;
         b. Prior client: confirm their expectations, schedule, budget, and goals for the assignment—follow the list below.
   B. General points to cover in a technical scoping process
      1. Verbal discussions—clarify and explore: "What do you want, when do you want it, and how much it will cost?"
      2. Clearly define expectations, schedule, deliverables, budget.
      3. Use templates or standard checklists when appropriate to focus the work tasks to known and generally well accepted approached and tasks:
         a. ASTM Phase I
         b. Attachment for our M&A document
      4. Development *draft* technical detailed scope proposal for in-house review by a second staff member—nothing goes out without review and scope verifica tion;
      5. Develop initial budget—determine the client's sensitivity to budget (low tech nology always follows low budget). If that is what the client wants, let them find someone else—in fact, recommend someone that meets their needs.
      6. Verbal review with client—confirm your assumptions made post telephone call, communicate budget, confirm scope, schedule, and deliverables—confirm understanding of both parties, tell them a written proposal is being finalized and will be sent out by a certain date.
      7. Finalize written proposal—QA/QC review as well as technical scope and budget.
      8. Submit with agreement for professional services.

9. Negotiate any contract discrepancies—If any discussion at all, this is typically around limitation of liability—general rule, if we know a client and have a good relationship with them, we may allow full access to our E&O insurance; otherwise, we limit our exposure to $50,000 or $250,000 maximum.
10. Request executed agreement prior to commencing services.
11. Completed project job number sheet
    a. What does successful project look like—need to complete this as you are scoping the project and writing the proposal—this keeps all the team mem bers on the correct page.

C. The issues below need to be recognized and addressed
   1. Business Issues
      a. Client: who is it?
      b. Terms
      c. Payment response and terms
      d. Invoicing details
   2. Technical Issues
      a. Scope: well defined
      b. Deliverables
      c. Schedule
      d. Final completion of project

III. Roles of the owner and technical firm/professional

IV. The contract

V. Roles of counsel representing both parties

VI. ADR provisions in the contract

VII. Insurance issues
   A. What is available and the typical provisions
   B. What is not covered by insurance

VIII. Concluding remarks by panelists

Detailed ADR Clauses for Business Agreements

1. Negotiation between executives

The parties shall attempt in good faith to resolve any dispute arising out of or relating to this Agreement promptly by negotiation between executives who have authority to settle the controversy and who are at a higher level of management than the persons with direct responsibility for administration of this contract. Any party may give the other party written notice of any dispute not resolved in the normal course of business. Within [15] days after delivery of the notice, the receiving party shall submit to the other a written

response. The notice and the response shall include (a) a statement of each party's position and summary of arguments supporting that position, and (b) the name and title of the executive who will represent that party and of any other person who will accompany the executive. Within [30] days after delivery of the disputing party's notice, the executives of both parties shall meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary, to attempt to resolve the dispute. All reasonable requests for information made by one party to the other will be honored.

All negotiations pursuant to this clause are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

1(a). Step negotiations (option)
If the matter has not been resolved by these persons within [45] days of the disputing party's notice, the dispute shall be referred to more senior executives of both parties who have authority to settle the dispute and who shall likewise meet to attempt to resolve the dispute.

2. Mediation

If the dispute has not been resolved by negotiation within [45] days of the disputing party's notice, or if the parties failed to meet within [20] days, the parties shall endeavor to settle the dispute by mediation under the [then current] _____ procedure [in effect on the date of this agreement].

2(a). Mediation with designated neutral (option)
If the dispute has not been resolved by negotiation within [45] days of the disputing party's notice, or if the parties failed to meet within [20] days, the parties shall endeavor to settle the dispute by mediation under the [then current] _____ procedure [in effect on the date of this agreement]. The parties have selected _____ as the mediator in any such dispute, and [he][she] has agreed to serve in that capacity and to be available on reasonable notice. In the event that _____ becomes unwilling or unable to serve, the parties have selected _____ as the alternative mediator. In the event that neither _____ nor _____ is willing or able to serve, the parties will agree on a substitute with the assistance of _____.

3. Litigation clause

If the dispute has not been resolved by nonbinding means as provided herein within 90 days of the initiation of such procedure, either party may initiate litigation [upon 00 days written notice to the other party]; provided, however, that if one party has requested the other to participate in a nonbinding procedure and the other has failed to participate, the requesting party may initiate litigation before expiration of the above period.

4. Provisional Remedies

The procedures specified in this Article 00 shall be the sole and exclusive procedures for the resolution of disputes between the parties arising out of or relating to this agreement; provided, however, that a party may file a complaint [for statute of limitations or venue reasons,] [to seek a preliminary injunction or other provisional judicial relief,] if in its sole judgment such action is necessary. Despite such action the parties will continue to participate in good faith in the procedures specified in this Article 00.

4(a). Option

If the agreement of the parties to use ADR breaks down and a later application for an injunction is made, the parties will not assert a defense of laches or statute of limitation, based upon the time spent on ADR.

4(b). Tolling Statute of Limitations

All applicable statutes of limitation and defenses based upon the passage of time shall be tolled while the procedures specified in this Article 00 are pending. The parties will take such action, if any, required to effectuate such tolling.

4(c). Performance to continue

Each party is required to continue to perform its obligations under this contract pending final resolution of any dispute arising out of or relating to this contract, (unless to do so would be impossible or impracticable under the circumstances).

4(d). Right of termination

The requirements of this Article 00 shall not be deemed a waiver of any right of termination under this contract.

Community Resource Mapping

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Rosemary Romero, Public Decisions Network, Santa Fe, NM

Panelist

Frank Martinez, Cibola National Forest, NM

Panel Abstract

The Mountainair Ranger District is situated in the Manzano Mountains, north of the town of Mountainair in central New Mexico and southwest of Albuquerque, the largest city in the state. The Mountainair Ranger District is part of Cibola National Forest. The six communities participating in the mapping project consist of four traditional Hispanic land-grant communities and two ranching towns. A project was initiated in the Manzano Mountains by Western Network with support from the local ranger and community members to develop community forest planning strategies. Community resource mapping, a method developed by Western Network, was used to gather local input into the ten-year management plan. Local U.S. Forest Service staff saw the project as an opportunity for exploring mechanisms to include local communities in its planning process. The project surveyed and documented, on maps and in surveys, the traditional and current uses of the forest by people living in six communities in close proximity to the mountains.

Individual Papers

Community Resource Planning: Mountainair Ranger District, New Mexico
By Rosemary Romero

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Community Resource Planning: Mountainair Ranger District, New Mexico

By Rosemary Romero, Public Decisions Network, Santa Fe, NM

The Mountainair Ranger District is situated in the Manzano Mountains north of the town of Mountainair in central New Mexico, southeast of Albuquerque, the largest city in the state. The district consists of about 45,300 hectares. The Mountainair Ranger District is part of Cibola National Forest. The six communities participating in this project consist of four traditional Hispanic land grant communities and two ranching towns.

Descendants of Spanish explorers first settled the area in the seventeenth century. The village of Manzano and its vicinity were for several generations a center for Spanish Catholic missionary efforts to convert the Indians of Quarai and Abo. In the nineteenth century, when New Mexico became a territory of the U.S., Anglo homesteaders and ranchers established the town of Mountainair. Most of the land now managed by the Forest Service was land once owned by the land grant heirs of the original Spanish settlers. Land grants were large tracks of land given to families and communities by the king of Spain when this part of the country was part of the Spanish Empire. Everyone of the village managed the land and all of its resources as “common lands,” but when ownership was transferred to the U.S. Forest Service, at the close of the Spanish-American War, so did the management, resulting in restricted use and access to local people. The land grants have posed significant problems for the Forest Service due to boundary disputes, illegal use of the forest, and access by former grantees who still maintain that Forest Service land belongs to the Spanish land grant heirs.

Access to forest resources by these communities did not change; local people continued to use the forest for hunting, fuel wood, lumber, cattle grazing, and other traditional uses, but subject to permission and supervision by the local district ranger. What did change was that other people also began to use the mountain for nontraditional purposes. Logging companies built several mills to supply the railroad and outside construction demands, mining companies moved in to remove valuable minerals, and cattle companies grazed large herds of cattle.

Most recently, as the population of the area and neighboring cities like Albuquerque and Santa Fe have grown, the demand and use of the mountains has changed. The mines and lumber mills are now gone, replaced by recreational facilities for newcomers and people from the larger cities. Hikers, campers, cross-country skiers and sightseers dominate the mountains. While many of the traditional forest uses remain, like fuel wood and herb gathering, hunting and piñon nut and berry picking, many old practices like cattle grazing, logging, and mining are increasingly being contested. Legislation to protect threatened and endangered species as well as environmental concerns about overgrazing and protection of ecosystems is further affecting the needs and uses by local people.

Today, the forest is in poor condition. Much of the old growth is gone and generations of trees are in need of thinning to reduce fire danger. Wildlife is disappearing, and erosion and pollution threaten the watersheds. Many people from the local communities continue to rely on the forest as their principle source for medicinal herbs and for other traditional spiritual or inspirational purposes. The local district ranger and the regional forester recognized that management of these resource requires that they provide for the needs of local people and also meet the demands and interest of the broader public. Their desire is to improve and protect forest conditions while at the same time allowing people to use the forest.

In 1995 the Western Network, a nonprofit organization based in Santa Fe, selected the Mountainair Ranger District as an area to develop community forest planning strategies. Community resource mapping, a method developed by Western Network, was used to gather local input into the ten-year forest district management plan. Local U.S. Forest Service staff saw the project as an opportunity for exploring mechanisms to include local communities in their planning process. The project surveyed and documented, on maps and in surveys, the traditional and current uses of the forest by people living in six communities in close proximity to the mountains. Starting at the northern most village and moving south, these six communities are: Tajique, Torreon, Manzano, Punta de Agua, Mountainair, and Abo.

The principal objective of the project was to assist community stakeholders in identifying how and when people use the forest and then emphasize the important contribution that local citizens can have in the decision-making process about forest management. The information gathered was analyzed in discussions between local communities and U.S. Forest Service staff to better understand how people utilized the mountains. The findings from this dialogue were used to revise the agency's ten-year forest management plan. The communities developed maps that were effective in demonstrating to the Forest Service the significant value of the mountains to them. They hoped that the information would enable them to enter into constructive dialogue with each other, as well as with the Forest Service, to design and develop joint projects that would improve forest conditions while providing for their needs and those of future generations. Twenty-five different uses of the forest were identified during the community-mapping process.

The Western Network recognized that sincere participation and commitment by all concerned citizens and stakeholders was required for this process to have any measurable chance for success. The first step in organizing this project was to present this idea, with its goals and objectives, to the regional forester of the Southwestern Region and other agency administrators of the U.S. Forest Service. During meetings with the Forest Service, it was discovered that there was great interest within the agency in improving their methods of communicating with local communities. This interest resulted in the agency providing the Western Network with a list identifying district rangers within the state who would be most sympathetic to a project of this type and would possible be interested in participating.

The Mountainair strategy required a neutral third party, like the Western Network, to act as facilitator and to work with community members in an open and safe forum. The Mountainair Ranger District decided after several community meetings to organize a citizens group called the Est Manzano Mountain Communities Development Committee. The committee's mission was to establish a community organization that consisted of elected representatives from each village and town involved in the project, and to work with the Forest Service as well as with other relevant state, county, and federal agencies.

After several meetings with Forest Service officials, the committee and the agency began negotiating current issues to be included in the agency's ten-year management plan. In late 1997, the committee signed an agreement with the Forest Service to work together on the Forest Health Stewardship Project. The Forest Health Project is a 16-acre thinning project focusing on ponderosa pine. Instead of prescribed burning, the thinning project would allow the community to remove timber, which could be used by the community.

Lessons

The community-based, collaborative planning process described above reflects the type of dialogue occurring between many local stakeholding groups concerned about public forest land management. In the case of the Mountainair Ranger District, the community-mapping project succeeded in enabling participants to discuss their diverse concerns, interests, and needs, with respect and sincerity. An important reason for the successful outcome of this process was the sincere commitment and hard work on the committee members and the district ranger and his staff. The participants of U.S. Forest Service personnel in community discussions allowed joint input into strategic discussions and a unified sense of purpose. The Mountainair case demonstrates the success of bringing all participants to the table and working collaboratively to address the needs of each group.

The process in Mountainair is not yet complete and much work remains to be done to establish operational systems of joint forest management. However, the organizational and conceptual groundwork for successful collaboration is now in place and all interested parties are ready to work on projects that are realistic and achievable. Several general points to consider for this process based on the experiences of the Western Network are:

- Identify the total domain considered part of the area of resource use without any reference to political or physical boundaries.
- Ensure all interested stakeholders and participating community leaders are invited to attend the meeting and recruited to educate their local groups regarding the benefit of becoming involved in the forest management planning process.
- Offer to conduct personal interviews for those people who cannot attend the meetings or choose to remain anonymous.

- Hold discussions with community representatives regarding their use of the forest lands, both legal and illegal.
- Highlight issues by superimposing community sketch maps onto the existing political and land management boundaries to identify the ways in which existing management policies hinder or facilitate the community's pattern of resource use and environmental needs.
- Use neutral facilitators to create a dialogue between the Forest Service and the communities to ensure that traditional resources users needs are taken into account in the implementation of specific policies and other federal projects.

Making Collaboration Work: Understanding the Quincy Library Group in the Context of Broader Case Experience

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Julia Wondolleck, School of Natural Resources and Environment, University of Michigan, Ann Arbor, MI

Panelists

Todd Bryan, ASSENT, Boulder, CO, Ann Arbor, MI

Steven Yaffee, University of Michigan, Ann Arbor, MI

Panel Abstract

A decade of experience in collaborative approaches to public resource management has demonstrated that this terrain is broad and varied and not easily described by the events of a single case. This panel will first discuss the lessons from the experience of close to 200 cases of collaboration in resource management. What did the parties in these processes do that fostered their success? This part of the panel discussion will examine eight key characteristics shared by the collaborative groups in five comprehensive studies of ecosystem management, habitat conservation planning, and national forest management that enabled them to sustain their interactions over time, achieve on-the-ground results, and address challenges encountered along the way. The second part of the panel discussion will focus specifically on the experience of the Quincy Library Group in the context of this broader experience. Insights based on two years of qualitative research on the group, including the organizations and individuals involved (both inside and out), and the dynamic political and social context in which it resides, will be discussed in order to make sense of this high profile and controversial case.

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How Well Is Collaboration Working? Integrating Multi-stakeholder Dialogues into Policy Decision Making

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Ann Moote, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

Panelists

Mette Brogden, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

Alex Conley, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

Susan Moodie, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

Rachel Yaseen, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

Panel Abstract

Collaborative processes emphasizing dialogue among stakeholders are often presented as an alternative policy making paradigm. Yet collaborative processes are typically not well-integrated with the status quo of social and political processes. This panel will explore how emerging and traditional approaches to policy making in natural resource management can be reconciled. Presentations will describe current research evaluating collaborative and community-based approaches to natural resources management in the United States; a case study of a statewide policy dialogue on open space that highlights the challenges of integrating collaborative policy dialogues with traditional legislative processes; the role of adult education in building community capacity for effective public policy dialogue; and lessons from Australia's Landcare movement, a successful partnership among community groups and private individuals, government agencies, corporations, and the media to promote sustainable natural resource systems. This panel highlights some of the work currently being conducted at the Udall Center for Studies in Public Policy, a research, education, and outreach unit of The University of

Arizona. The Udall Center's environmental conflict resolution program provides training in facilitating and mediation; convenes workshops, conferences, and discussion groups on current issues related to environmental conflict resolution; and facilitates multi-stakeholder policy dialogues on environmental conflicts in the Southwest.

Individual Papers

Evaluating Collaborative and Community-based Natural Resource Management: An Assessment
By Alex Conley and Ann Moote

Landcare: Restoring Australia's Landscapes
By Susan Moodie

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Evaluating Collaborative and Community-based Natural Resource Management: An Assessment

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Introduction

Over the last decade, collaborative and community-based processes have been widely promoted as promising new approaches to managing natural resources in the U.S. Many people believe that these processes reduce conflict among stakeholders, allow environmental, social and economic issues to be addressed in tandem, and produce better decisions (Bernard and Young 1997; Brick and Cawley 1996; Jones 1996; Weber 2000). Collaborative responses to many resource management challenges seem to have developed independently and yet simultaneously in many regions (Weber 2000) and success stories have been widely publicized. Today, calls for more collaborative and community-based decision making in natural resource management can be found in everything from the popular press (e.g., Krist 1998) to promotional videos (e.g., Applegate Partnership 199?; Bureau of Land Management 1995) to the Forest Service's new proposed planning regulations (64 FR 54073). Collaboration has been promoted across the political spectrum, by groups ranging from conservative think tanks (Harrington and Hartwell 1999) to critical theorists (e.g., Dryzek 1996; Dryzek 1990). Many state governments are actively promoting the use of collaborative approaches, foundations and agencies are funding many collaborative efforts, and nongovernmental organizations like the Sonoran Institute and The Nature Conservancy's Center for Compatible Economic Development are actively promoting "collaborative conservation."

Yet as collaborative and community-based approaches gain visibility, they have attracted some vocal criticisms, and both advocates and critics have assembled a wide range of arguments to support their views (Kenney 2000). An increasing amount of formal research is being done on this new movement, but it is spread out between many different disciplines, with researchers in one field often unaware of much of the work done in others (Conley 2000). As the movement-and our understanding of it-comes of age, interest in evaluating collaborative and community-based approaches to natural resource management is growing. This paper examines this interest in evaluation, discusses the criteria and methods that have been used to evaluate these processes, gives an overview of the types of evaluations that have been conducted to date, and identifies next steps for evaluation. But first, some definitional clarifications are in order.

Definitional Issues

Diversity of Terms

A new and sometimes confusing terminology is developing. Collaborative and community-based groups have been referred to as partnerships (Moote 1996; Williams and Ellefson 1997; Wondolleck and Yaffee 1994), consensus groups (Innes 1999), community-based collaboratives (Moote *et al.* 2000), watershed efforts [NRLC (Natural Re-

sources Law Center) 1996], and alternative problem solving efforts (Kenney and Lord 1999). The broader movement towards more collaborative and community-based management has been called collaborative conservation (Brick, Snow, and Van de Wetering 2000; Cestero 1999), community forestry (Brendler and Carey 1998), community-based conservation (Western and Wright 1994), community-based ecosystem management (Gray, Enzer, and Kusel in press, 2001), grassroots ecosystem management (Weber 2000), community-based environmental protection (Environmental Protection Agency 1997), and has been linked to the idea of co-management (Paulson 1998). The movement is also related to environmental conflict resolution (Emerson, Yarde, and Heikkila 1997) and alternative dispute resolution. Specific techniques have also been developed, including coordinated resources management (Anderson and Baum 1988; Cleary and Phillippi 1993) and collaborative learning (Daniels and Walker 1996; Daniels and Walker in press). While these many different concepts differ in some specifics, they generally share a core set of features, which are encapsulated in Moseley's (1999) comparison of community-based conservation, traditional conservationism and environmentalism:

*"*First, community-based conservation is more directly participatory. Instead of citizens acting as watchdogs who critique plans produced by agencies, they participate in problem definition, planning, problem solving, and implementation. In theory, these collaborative processes are open to everyone, and government agencies, tribes, scientists, interest groups and private citizens participate on equal footing. Second, instead of an adversarial politics in which people negotiate from preconceived, fixed positions, participants in community-based conservation engage in discussions to develop solutions by learning and thinking creatively together*"* (p. 45).

Collaborative vs. Community-based

The words *"*collaborative*"* and *"*community-based*"* are often used interchangeably, but it is worth drawing a distinction between the two. Community-based resource management is resource management by local people that, in its ideal type, supports the goals of ecological and social sustainability (Brosius, Tsing, and Zerner 1997). *"*Collaborative*"* refers to the involvement of multiple stakeholders (such as landowners, public agencies, interested citizens, scientists, environmentalists, and other interest groups) in planning and management, often at a watershed or ecosystem scale that spans multiple ownerships or jurisdictions, and often using consensus-based decision making. It is easy to imagine a community-based effort that is not collaborative, especially in small, homogenous communities where community members band together as advocates for a particular interest. It is also easy to conceive of collaborative processes that are not community-based; examples include policy dialogues among national or regional interest groups, interagency task forces, and advisory committees. What this paper, and most of the literature it references, focuses on are efforts that are both collaborative and, at least to some degree, community-based.

Many have pointed out the limitations of the concept of community (Leach, Mearns, and Scoones 1997), and the associated risk that community-based management that focuses on geographically-defined communities will exclude valid non-local interests like migrant workers (McLain and Jones 1997) and national and regional environmental

groups (Blumberg 1997; McCloskey 1998). Others have responded by distinguishing between communities of place, interest, and identity of which only the first can be defined geographically (e.g., Duane 1997). When carried to an extreme, this type of subdivision into distinct communities (of which any one person may be a member of several) starts to merge with the idea of distinct stakeholder groups—at which point the definitions of community-based and collaborative management also start to merge. While many collaborative efforts in natural resource management in the U.S. strive to give local place-based communities more input into decision making, few qualify as purely community-based approaches. Virtually all exist in a complex interplay of different levels of government, and other local, regional, and national interests.

Mediation vs. Partnership Approaches

In many discussions about collaborative processes, it soon becomes clear that two different approaches are often confused. One, referred to here as the "mediation approach," focuses on collaborative efforts convened to resolve specific, defined conflicts. The second, which we call the "partnership approach," focuses on the development of longer-term partnerships that aim to promote ecological, economic, and social "health" within a defined region.

In the mediation approach, the emphasis is on coming to a mutually acceptable agreement, and collaboration can be viewed as a negotiation process based on some form of consensus. Those working from the mediation perspective emphasize the importance of a neutral, professional facilitator who is an advocate for a fair process. In the partnership approach, on the other hand, the emphasis is typically on developing a common vision for a landscape and then undertaking projects and policy changes that implement that vision. Leaders in the partnership approach are often activists within their communities—typically ones who espouse the idea that local economic and ecological sustainability are interrelated.

The differences between these two approaches affect how processes develop and how they are evaluated; criteria appropriate for evaluating one approach may not be appropriate for another. To date, more evaluations have been done of the mediation approach. One of the goals of this paper is to look at how that experience can be carried over to the partnership model.

In reality, of course, collaborative efforts exist along a continuum, of which these two approaches are perhaps extremes. Many other distinctions can also be made, and many of them have implications for how evaluations should be done. Systematically matching different processes to appropriate evaluation methods and criteria will become easier as classification systems that distinguish between different types of collaborative efforts are further developed (for current efforts in this area, see Cestero 1999; Coughlin *et al.* 1999; Selin and Chavez 1995).

Evaluating Collaborative and Community-based Management: Why Now?

Why Now?

We can fairly say that the movement towards collaborative and community-based natural resource management is coming of age in the U.S. Three significant signs of this are: 1) the broad acceptance of numerous variations of the idealized narrative that describes how collaboration works and why it is effective, 2) the increasing number of critics challenging that idealized narrative, and 3) the push by many federal agencies, state governments, and other policy makers to institutionalize collaborative and community-based approaches.

Over the last fifteen years, a broad body of experience with different approaches to collaborative and community-based management has been built (Some of this experience is catalogued in Bingham 1986; Coughlin *et al.* 1999; Natural Resources Law Center 1996; Wondolleck and Yaffee 1994; Wondolleck and Yaffee 2000; Yaffee *et al.* 1996). As interest in and experience with such processes grows, calls for evaluations of specific efforts and the broader movement are becoming more common (Firehock 1999; Innes 1999; Innes and Booher 1999; Kenney 1999; Kenney 2000; Moote *et al.* 2000). Evaluation is also coming to the forefront as collaborative groups move through an adaptive management cycle and strive to evaluate their own efforts (e.g., community forestry groups current efforts at all-party monitoring of the social and environmental impacts of projects).

This interest in evaluation is fueled by the belief that effective evaluation can help us: 1) determine when the idealized narrative used to justify these processes holds true and when it does not, 2) address the criticisms that have been raised, and 3) assess and refine efforts to institutionalize a movement that has developed largely from the grassroots and is often disconnected from established social and political processes. Between the critics and the current body of experience, we are coming to the realization that collaborative and community-based approaches can but do not always work, and that at times failure comes at a heavy cost in time and effort expended, and perhaps more significantly, in social capital consumed rather than built. Many hope that evaluation can help inform discussions about our understanding of both the potential and the limits of collaborative and community-based natural resource management.

Despite the widespread interest, methods for evaluating collaborative and community-based approaches and their impacts are not well developed, and criteria on which evaluations should be based are not always obvious or easy to assess. This is in part because there are many different reasons for and approaches to evaluating these processes.

Why Evaluate?

Motives for evaluating collaborative and community-based processes vary. Participants are interested in evaluations that can help them improve the efforts they are involved in and meet the goals they set out for themselves. Facilitators and resource managers are

looking for guidelines to help them determine what specific approaches to use in specific circumstances. Policy-makers want informed assessments of the advantages and disadvantages of different types of collaborative efforts to help them formulate appropriate policies. Funders and interest groups frequently need to determine whether or not to support a given collaborative effort, and whether or not to support policies that promote or inhibit collaborative and community-based approaches. Advocates of these processes want proof of their success to show to others (Innes 1999), while critics want to demonstrate that their fears are well founded (e.g., Coglianese 1999). Academics may be interested in exploring how the movement towards collaborative and community-based approaches impacts society and our system of government as a whole, or in seeing how specific processes fit—or do not fit—into theoretical models they have developed. Obviously, the motive behind an evaluation will play a large role in determining the questions that are asked and the criteria and methods that are most appropriate to answering them.

Who Should Evaluate?

Collaborative and community-based efforts are constantly being evaluated, formally or informally, by almost everyone who interacts with them, hopes to learn from them, or is concerned about outcomes that are in part determined by collaborative processes. Yet many people, especially advocates for specific collaborative groups and processes, are beginning to ask who has the right to evaluate these efforts. Some have called for neutral, third party evaluations (Innes 1999), while others—especially those directly involved with collaborative and community-based processes—emphasize the importance of self-evaluation. Many emphasize the need for evaluators to be intimately familiar with a process, its history, and its context, and disparage "evaluation from a distance" (Moote *et al.* 2000), while others have developed evaluation methodologies that are designed to be noninvasive and readily conducted by an outsider (d'Estree and Colby 2000). Participatory evaluation—in which groups conduct self-evaluations, and/or the evaluator works closely with those involved in and affected by a project or process-is often cited as more desirable, informative, and influential than evaluation by an outsider (Jackson and Kassam 1999; Moote *et al.* 2000). However some worry that those directly involved in a process may have vested interests that reduce the objectivity of an evaluation (Moote *et al.* 2000); this worry is probably of most concern when asking questions that potentially challenge the legitimacy or value of specific processes.

What to Evaluate?

Depending on the evaluator's interests, evaluations may examine a variety of outcomes, some easier to measure than others. The earliest evaluations of collaborative approaches to environmental mediation focused on whether mediation actually resulted in agreements that were cheaper, faster, fairer, more innovative, and longer lasting than those achieved through litigation in the court system. The results of such evaluations were mixed (Bingham 1986; Sipe 1998). In response, Buckle and Thomas-Buckle (1986) proposed that even "failed" mediations (where no formal agreement was reached) could have positive and long-lasting outcomes, like increased understanding and improved relationships among parties involved. Proponents of the mediation approach now commonly identify "social" outcomes like these as important evaluation

criteria. Kenney (1999) recently distinguished between two similar categories of success applicable to the partnership approach: success in achieving environmental outcomes (e.g., a watershed group is successful if its activities improve water quality), and success in building social capital (e.g., a group is successful if it improves communication among stakeholders). For many partnership efforts, local economic development outcomes might be placed on an equal footing with environmental outcomes as a third type of success to be judged. Thus even a preliminary look turns up four different types of outcomes that could be evaluated, depending on the nature of the process: agreement outcomes, social outcomes, environmental outcomes, and economic outcomes.
Some have called for evaluating only one narrowly defined outcome at a time, in order to make the analysis tighter and more consistent (d'Estree and Colby 2000), while others stress that all outcomes of a process must be considered simultaneously (Innes 1999). Some evaluations focus on implementation, and simply identify what was done (e.g., X acres of restorative thinning were completed); others may focus on effectiveness (e.g., did that thinning really reduce the risks of catastrophic fire, as was intended).

Evaluation can also occur at many different scales. At the project scale, for instance, a watershed council may want to determine whether a stream restoration project was having the desired impacts on the stream system. The council or a third party may evaluate the workings of the watershed council as a whole, looking at all its projects and the processes used to develop and manage them. Yet another evaluation may look at the state program supporting such councils (program evaluation). At the societal or national level, an evaluation may examine the way the broader movement is changing the nature of democracy and governance. Evaluations can also occur at different temporal scales; they may be continuous, occurring in an iterative, adaptive fashion, or may occur at specific points in time, as in Innes' (1999) distinction of midcourse, end-of-process and retrospective evaluations (also see d'Estree and Colby 2000).

What Type of Data?

The methods and types of data used in evaluations of collaborative and community-based natural resource management depend on the questions being asked and the scale of the evaluation. Table I on the next page gives some examples of the diversity of methods used in six different evaluations.

Evaluation is a field unto itself, with a well-developed set of methodologies (for examples, see Bingham and Felbinger 1989; Chelimsky and Shadish 1997; Jackson and Kassam 1999; Patton 1997). Typically, the emphasis has been on evaluating international development projects and government efforts to provide social services. Both of these are cases where the funding and structure of a project-or even its continued existence-is often tied to the outcomes of formal assessments, and where, at least in theory, a project has a clear mission and implementing structure. Traditionally, evaluators have used quantitative, quasi-experimental methods to identify outcomes that are correlated with project activities (e.g., Bingham and Felbinger 1989). More qualitative, ethnographic methods have gained more credibility over time, and recently, participatory evaluation-in which project beneficiaries take an active role in the evaluation process-has been widely promoted. All of these methods have been applied to collaborative and community-based processes, and each has its own set of benefits and limitations.

TABLE I: EVALUATION METHODS, CRITERIA AND FINDINGS

Researchers/Study	Methods	Criteria (types, examples)	Results
Moote et al. (1997)	One case Document review Participant observation Interviews Questionnaire	Efficacy – decision supported Broad Representation Open, informal access Multidirectional information exchange & mutual learning Continuity of participation Shared decision-making authority	Lack of rules, guidelines hindered process Federal law limits application
Duane (1997)	Two cases Document review Participant observation Interviews	Consensual decision All stakeholders deliberate Equal empowerment Emancipatory knowledge Social capital (horizontal social networks) Resilience	One case met criteria, one case failed
Daniels & Walker (1996)	One case Post-process surveys	Perceptions of management process (constructive communication, learning, open, flexible, adaptive) Perceptions of participation process (willingness to participate, learning, use of facilitators, openness, inclusiveness, representativeness, use of information, etc.)	Participants prefer collaborative discussion as means of participation – improved understanding of issues, improved decisions; Moderate relationship benefits
Paulson (1998)	8 case studies: Document review Participant observation Interviews 34 cases - Telephone survey	Process initiation Negotiation of goals and objectives Roles and power in group process Process for handling different views Assessment of accomplishments Assessment of "win-win" Assessment of problems How stakeholders selected, invited Relational changes Use of facilitator Monitoring of outcomes	Conflicts often reduced Found solutions that meet multiple interests Can't deal w/ strong values/interests conflicts Process not highly effective
Susskind et al. (2000)	100 cases Interviewed approx. 400 participants	Why pursued mediation Reasons for dissatisfaction w/ traditional Prior views of mediation Who initiated Obstacles encountered Was case settled? Were interests served? Was progress attained? Was settlement implemented? Mediator important? Relative time & cost	Even if case not settled, mediation allows significant progress toward conflict resolution Mediated settlements tend to be creative, stable, implemented Neutrals are important Negotiation costs less, takes less time
Moseley (1999)	6 case studies Document review Participant observation Interviews	Organizational development Improved relationships Occurrence of inclusive discourse On-the-ground outcomes Persistence of group	Attempts to institutionalize collaborative approaches were most successful when adequate social and human capital was already present

Quantification of Outcomes

A few efforts at using quantitative methods and statistical analyses to evaluate collaborative processes have been made. For example, Gericke and Sullivan (1994) looked at different forest planning processes to see if any specific characteristics were correlated with the number of formal appeals filed and the time spent resolving them. They found that small group participatory exercises during the planning process reduced the probability that many appeals would be filed against a draft forest plan. Looking at mediation-type processes, Sipe (1998) looked at whether mediated processes had a higher

settlement rate and implementation of settlement agreements than processes that relied on litigation or administrative hearings.

However, such efforts have not always been well received [see Innes (1999) criticisms of Coglianese (1997), and criticisms noted in Moote *et al.* (2000)]. Principle challenges in using quantitative methods to assess collaborative and community-based processes stem from the difficulties involved in quantifying outcomes, correlating them with possible causes, and identifying a sufficient sample size, given that collaborative processes vary considerably in structure and context. As Innes (1999) notes:

*"*It is difficult to identify and document these other outcomes, however, in part because they may not be identifiable until long after a process is over. And these consequences are difficult, if not impossible, to measure quantitatively, even when they are quite significant. It is also challenging to find ways to attribute outcomes directly to a particular consensus-based process. Consensus building is typically used in complex situations, in which many activities are taking place simultaneously and external conditions keep changing.…It is often impossible to determine conclusively that the consensus process cause [a change].*"*

Such quantitative approaches are perhaps most applicable with outcomes that are readily quantified, such as the number of subsequent lawsuits, acres of forest thinned, or dollars invested, in situations where a number of different processes are being used in similar contexts, and/or where there is sufficient baseline information to allow reliable comparisons of pre-process and post-process. A benefit of outcome evaluations is that they frequently do not depend on participants' self-assessments-indeed, they can sometimes be conducted through simple document analysis-and therefore may be viewed as more objective than participant surveys (discussed below). On the other hand, outcome measurements are not as useful as other methods for evaluating process issues like mutual learning, perceived fairness of the process or outcome, and conflict abatement.

Surveys of Participants' Assessments

Perhaps the most common type of data used to evaluate collaborative and community-based processes is participant assessment of the success of a process, as determined using surveys. Typically, surveys ask respondents to identify and assess a process's outcomes, the factors that led to them, and the appropriateness of the processes used. The simplest surveys focus on evaluating a single process at a time. For instance, Daniels and Walker (1996) used post-process surveys to assess a participatory approach to forest service planning. In the written survey, participants were asked to report on the extent to which the agency was open, flexible, and willing to engage in constructive communication. They were also asked to assess the effectiveness of different aspects of the process, such as the use of neutral facilitators, the use of information, and stakeholders' willingness to participate. In a similar evaluation of mediated processes, the Montana Consensus Council found that participants were typically more satisfied with the relationships that were built and the process that was used, and less satisfied with the resulting agreement. They also found that participants did not necessarily believe that the mediated process that they had participated in saved time or money (Harmon 1999).

A number of researchers have also surveyed participants in studies of many groups. For example, Paulson (1998) surveyed participant in 75 coordinated resource management efforts in Wyoming, Williams and Ellefson (1997) surveyed participants in 40 collaborative partnerships involving the U.S. Forest Service, Carr *et al.* (1998) surveyed participants in collaborative forest planning exercises, and Susskind *et al.* (2000) looked at the assessments of ±400 participants in 100 different land use mediation cases.

This method is particularly useful for assessing relationship and social changes, such as changes in stakeholder attitudes and opinions, reduced conflicts between parties, and increases in social capital. However, the survey method has its limitations. It often only assesses what participants believe, not what actually may be-for example a participant's assessment that a given process saved money may or may not be correct when compared to a careful accounting of costs (Harmon 1999).

Single-shot surveys and interviews have been criticized for failing to capture changes in perspectives over time. Longitudinal studies are one way to address this. By surveying participants before and after a process, one can asses both participant's opinions about a process and its outcomes, and the way those opinions-and other attitudes, opinions and values-have changed over the course of the process. In many cases, participants themselves may not even have noticed or articulated such changes. When such studies are done with adequate controls, they provide the best means of assessing how and if collaborative processes change people's understandings, opinions, and values.

The participant survey approach has also been criticized because results are limited to the perspectives of those participants who were selected or chose to participate in the study. This is particularly true of surveys across several cases where it is logistically necessary to limit the number of informants per case. Most studies have also ignored the opinions of parties who did not directly participate in a process, but were affected by it. This shortcoming can be readily addressed by identifying and surveying affected nonparticipants, but this can be time consuming.

Participatory Evaluation Workshops

Participatory methods that have been widely applied in both meeting facilitation and the evaluation of international development projects can also be applied to evaluating collaborative and community-based efforts. Many of these involve group activities like discussions among people affected by a project, group ranking exercises to rate outcomes and alternatives, flowcharting of project impacts, and mapping exercises that can be applied to both landscape features and abstract concepts (as in Venn diagrams of relationships between different organizations).

Detailed Case Studies

Interviews with participants, document analysis, and participant observation have been used in more in-depth case study approaches, sometimes in combination with participant surveys. Often, case studies are conducted by participants in the process, but they can also be conducted by non-participants. Detailed case studies frequently provide more data for the evaluation of group process, and offer the added benefit of permitting

in-depth analysis of the relationship between different outcomes. However, they are time consuming and so are rarely used to compare more than six to ten different cases. In-depth case studies of only a few cases permit only limited extrapolation of results to other contexts; therefore they have limited utility in the analysis of broad societal trends. To date, most studies of the partnership approach have been case studies using ethnographic methods (e.g., Coughlin *et al.* 1999; Duane 1997; Kenney and Lord 1999; Moote, McClaran, and Chickering 1997; Moseley 1999; Paulson 1998; Smith 1999). D'Estree and Colby (2000) have developed a systematic approach to evaluating mediation-type processes that emphasizes document analysis, while Innes (1999) emphasizes the use of interviews.

What to Compare With?

The type of data used is only one aspect of methodology; the types of comparisons made are equally important. Evaluations of collaborative and community-based efforts typically take one of four forms: 1) comparing a process's outcomes with its goals, 2) comparing a number of like processes, 3) comparing a collaborative process to other types of processes, and 4) comparing a process to a theoretical ideal.

Comparing a Process with Its Goals

The form of evaluation that is most commonly applied to collaborative and community-based processes involves assessing whether and how processes have met the goals they have set out for themselves. Goals may identify desired social, economic, or environmental outcomes, and are typically set by a collaborative group itself, or by the broader program of which the process is a part. Typically-especially in the type of self-evaluations found in grant proposals, annual reports, and the like-the data used are quantified outcomes (as discussed in the previous section), which are then compared to target outcomes identified in mission and goals statements, management plans and the like. However, a goal-based evaluation can also use other methods/types of data. For example, if one of a process' goals is improving relationships among participants, the data used to assess if that goal was met may be from a survey of participants' assessments of how relationships have changed.

Evaluation of goals is particularly popular with participants in collaborative and community-based processes who are working within an adaptive management framework. They often use such evaluations to determine if goals have been met, and if the methods used to meet them need to be revised, and/or the goals changed. They are also popular with agencies and organizations that provide financial or technical support to collaborative or community-based processes. However, evaluations that only look at whether goals have been met do not determine if the goals are indeed desirable outcomes to anyone other than those that set them. Such evaluations also require that a process has clearly defined and uncontested goals, which may not always be the case, especially in efforts that bring together very different interests.

Comparing Collaborative and Community-based Processes

Another basis for evaluation is comparing similar types of processes and ranking them according to different criteria, in an effort to determine which is more successful than the others by each criteria, and why. Moseley's (1999) study of six watershed groups in

Oregon is an excellent example. Through her comparisons, she was able to show how the presence or absence of different types of social and human capital affected the ability to implement the collaborative planning model promoted by the state's Watershed Health Program. Other examples include Duane (1997), Paulson (1998), Williams and Ellefson (1997), Carr *et al.* (1998), and Imperial (2000). These types of comparisons can show how variations in processes used and social and ecological contexts affect different kinds of success; they also help us move beyond focusing just on success stories.

Comparing Different Types of Processes

A second type of comparison ranks selected collaborative and community-based processes against other processes intended to achieve the same ends. As noted earlier, Gericke and Sullivan (Gericke and Sullivan 1994) compared different approaches to forest planning to collaborative planning, while Sipe (Sipe 1998), Coglianese (Coglianese 1997) and d'Estree and Colby (d'Estree and Colby 2000) compared collaborative processes to other forms of dispute resolution.

One theoretically intriguing, if perhaps practically unwieldy, approach to comparing both different collaborative efforts and different types of processes is the institutional analysis and development (IAD) approach developed by Elinor Ostrom and colleagues. This approach sets up an analysis framework that identifies institutions (both formal and informal), different types of rules (including cultural norms and other unwritten rules), problems and incentives, and related transaction costs, and then attempts to correlate these features to different kinds of success. Kenney and Lord (1999) present the IAD framework and use it to compare three different cases that involve collaborative watershed and forest management. They found that collaborative efforts were most likely to succeed when a) fundamental values conflicts were already resolved, and b) adequate incentives for alternative problem solving (typically litigation or regulation, or the threat thereof) exist. Imperial also gives an overview of the IAD framework and then applies it broadly to ecosystem management as a whole (Imperial 1999) and, in a more limited fashion, to six case studies of collaborative watershed management (Imperial and Hennessey 2000).

Comparing to Theoretical Ideals

Taking a deductive rather than inductive approach, some researchers have compared specific processes to criteria derived from a theoretical construct, to see how well the process approaches the theoretically ideal process. For example, Duane (1997) evaluated two community-based approaches to forest management by comparing them to the tenets of communicative rationality (which identifies conditions under which deliberation among all stakeholders should lead to equitable, "communicatively rational" solutions), and concluded that the process that met more of the conditions identified by theory was more successful. Moote *et al.* developed a set of criteria from the literature on ideal forms of participatory democracy, and then evaluated both a case study (Moote, McClaran, and Chickering 1997) and the broader movement towards more participatory approaches to public lands management (Moote and McClaran 1997) to determine how well they implemented those ideals. Many theories of collaboration identify all-inclusive representation as an essential condition for successful collaborative

efforts, and it is an appealing criteria to evaluate, for it can be relatively easily assessed from meeting minutes and the like. Yet preliminary investigations indicate that representation in collaborative efforts is often not as broad as many proponents claim, or theory would recommend.

The limitation of comparisons with theoretical constructs is the implicit assumption that the theory is *"good"*; for example, that, as both Innes (1996) and Duane (1997) assert, processes that adhere to the tenets of communicative rationality necessarily result in better outcomes than ones that do not. Yet theories may not always match reality. For example, despite the many theories that identify all-inclusive representation as essential for effective collaboration, it may not be as necessary for achieving some sorts of success. Indeed, it can be argued that many collaborative efforts have an implicit and obviously non-inclusive goal of marginalizing the extremes, as is implicit in the idea of *"*finding the radical center*"* [Bill McDonald as cited in Bernard and Young (1997)]. At some point, collaborative efforts in which all interests are not represented start to blend with the coalition building of traditional pluralistic politics. This forces one to ask if a process that gives more voice to interests that are typically not heard is bad because it does not have representation of all interests or if it is good, because, on a large scale, it adds another voice to the policy making arena?[1]

Evaluations may also be used to challenge theories. For example, Coglianese (1999) notes the widely-disseminated theory that consensus processes result in specific benefits, then uses a case study to show that reality does not necessarily support the theory.

What Criteria to Use?

As should be clear by now, any attempt at evaluation is based on comparing reality to a set of criteria. Perhaps the simplest criterion put forth to assess collaborative efforts is the one used by Williams and Ellefson (1997), who *"*defined a successful partnership as a group able to attract and keep individuals engaged in partnership activities.*"* Such a simple definition of success has obvious shortcomings and the deeper one delves, the more criteria one can identify-indeed each of the often cited benefits of collaboration and the increasingly common criticisms [see Kenney (2000) and Coughlin *et al.* (1999) for overviews of both] can easily be turned into criteria for measuring success or failure of specific collaborative efforts. Thus, *"*collaboration saves money*"* becomes *"*did it save money?*"* and *"*collaboration leads to local cooption*"* becomes *"*did it lead to local cooption?*"* Evaluators have used a wide range of criteria to assess collaborative and community-based approaches to natural resource management.

[1]This criteria question is key when evaluating many community-based efforts in isolated rural areas which, because of geographic constraints, can not directly involve all interests from outside the community in their regular meetings, but which maintain that they have an important role to play in making local voices heard in decision-making processes that have traditionally ignored them.

A Comprehensive Set of Criteria?
As interest in evaluating collaborative efforts grows, a number of people have started to identify sets of criteria that should be used. D'Estree and Colby (2000) develop what they present as a comprehensive set of criteria for evaluating environmental conflict resolution processes, while Innes (1999) proposes a number of criteria that should be considered when evaluating consensus processes. Looking specifically at the partnership model, Brett KenCairn (1998), a community organizer who has worked extensively with community forestry partnerships, has detailed criteria that foundations should consider when assessing whether to invest in a partnership. Blumberg (1999) an environmentalist who has at times been quite critical of collaborative efforts, has developed criteria he would use to assess whether or not to support a given collaborative process. Despite the very different perspectives and backgrounds of the authors, these lists of criteria are in many ways quite similar, indicating that developing a single comprehensive and broadly accepted set of criteria may be possible. Yet while such a list would facilitate the evaluator's task, it does not hold all the answers; the questions of values and of feasibility still loom large.

Acknowledging the Role of Values
Even if a standard set of criteria is agreed upon, the relative weights assigned to different criteria can dramatically change overall assessments of a process's success. As a result, different people may have very different assessments of the same process. While it is possible we could all agree on an all-inclusive set of criteria, the relative weights to attach to each—especially when they come in conflict—are far less likely to be universally agreed upon. How do we weigh capacity building against results on the ground? Economic efficiency against equity issues? Short term results of a process against the long-term precedents it sets? The value of experimentation against the risk inherent in undertaking projects with unknown outcomes? How do we compare a group that has accomplished little on the ground, whose tangible projects are in limbo—but that has clearly built relationships and reduced tensions in a community, with another group that has been quite successful at implementing projects all interests agree are beneficial, but that operated in an often exclusionary manner and has probably increased tensions and existing rifts in the community? Many people firmly believe that resolving conflict is inherently good; others may see conflict as an essential precursor to all real change (e.g., Modavi 1996). An evaluator primarily concerned with reducing the risk of forest fires may see the Quincy Library Group forest plan as exemplary and not understand at all the fears of a political activist aghast at the way legislation was used to bypass the Forest Service's standard administrative hierarchy (Blumberg 1997).

Clearly, ideology and beliefs figure centrally in criteria weighting, and the weighting process will remain the domain of political discussion. To expect any standard weighting to be broadly accepted is naive. In response, some have called for an objective evaluator to rank processes of interest according to each of a comprehensive set of criteria, creating a matrix, to which each user adds their own weights to come up with an overall assessment of relative success (d'Estree and Colby 2000). While conceptually appealing, this is still problematic, as a) conducting such a comprehensive evaluation will often require an inordinate amount of time and effort, and b) the way an evaluator ranks a

process-even on one criteria at a time-is almost inevitably influenced by the evaluators own values and perspectives.

Ultimately, we must acknowledge that evaluation is inherently normative. Value judgements are key in determining what makes a process successful or unsuccessful, and different people may have very different assessments of the same process. How evaluations-formal or informal-are conducted and how their results are disseminated can influence the support for a process and its subsequent outcomes, and people's careers and reputations. As a result it is often conflict-prone, as anyone who has been involved in an argument over the worth of a process can attest. Evaluations are often part of the process through which a collaborative or community-based effort's public image is negotiated, and different participants—and outsiders—may be pushing for very different images.

Keeping Evaluation Feasible

The final consideration in designing an evaluation method is keeping it feasible. Evaluation is typically done under time and budget constraints and is only useful if it influences future decisions. Using an all-inclusive set of criteria may be appealing, but is rarely practical. The questions that are asked should be relevant to decisions that are being made, whether at a project, process, or policy level. At the same time, there are times when the most interesting findings are not the ones we were looking for, reminding us that evaluations should not be constructed too narrowly. Findings should be made accessible and comprehensible to those in a position to use them and learn from them. The field of evaluation has long recognized this, with many placing emphasis on the idea of *"utilization-focused evaluation"* (Patton 1997).

Questions Evaluation Can Help Answer

Although evaluations are frequently case-specific, we see two important sets of questions that evaluation can help us answer: 1) When and where are collaborative and/or community-based approaches to natural resource management appropriate? When and where are these approaches inappropriate? and 2) How can collaborative and community-based approaches be effectively and sustainably integrated into existing legal, political, and social structures?

Appropriateness

This is the single most frequently asked question about these processes, the thing that critics, proponents, funders, and governments all want to know: When, where, and how do collaborative and community-based processes work best? When, where, and how should they not be used? Many have made efforts to answer these questions. Some have emphasized that collaborative and community-based efforts are successful when there are adequate incentives for all stakeholders to come to agreement and should not be used where win-win or win–no-loss outcomes are unlikely (Imperial 1999; Imperial and Hennessey 2000; Kenney and Lord 1999). Others have emphasized the importance of social and human capital (that is, established networks, leadership and skills) as precursors to successful collaboration, and note that collaboration should not be

pushed where these prerequisites do not already exist, unless efforts are made to build such capacity (Moseley 1999). Several have noted that collaboration is most effective in resolving conflicts based on misunderstandings and relationship problems-but is rarely effective when there are basic values conflicts (Kenney and Lord 1999; Paulson 1998). Others identify process guidelines meant to assure success (Innes 1996; Innes 1999).

This is only a brief sampling of existing findings meant to illustrate the types of lessons that are being learned through evaluation. We hope that it encourages future evaluations and syntheses of evaluations that further our understanding of when and where collaboration is and is not likely to succeed (as judged using different types of criteria).

Integrating and Institutionalizing Collaboration

Another important question asks whether collaborative and community-based processes are a new paradigm for natural resource management, or just supplement more traditional systems? Many advocates have promoted collaboration as a new way of doing things that will one day replace the old. Others emphasize that use of and participation in collaborative processes is strategic, and only sometimes preferable to other options: *"*Collaboration should be valued only if it produces better organizational performance or lower costs than can be achieved without it*"* (Imperial and Hennessey 2000). Many critics of collaborative efforts base their fears on the assumption that these new processes will bypass existing political and legal mechanisms; targeted evaluations can help us assess if this is or is not occurring, and if it is, what the impacts are. This in turn should help us understand how to integrate these new approaches with the old.

Associated is the question of how sustainable these efforts are. Both proponents and critics have noted the need for some institutionalizing of these efforts if they are to succeed in the long-term. Collaborative and community-based approaches to natural resource management *"*are largely irrelevant if they are not accompanied by a concerted effort to strengthen institutions and to build an indigenous capacity to sustain resource management and development actions*"* (White *et al.* 1994), and *"*without funding, they [collaborative groups] will have no professional staff, and thus will lack an institutional structure. Without a permanent institutional structure they are destined to wither away as the perceived crisis passes*"* (Coggins 1998). Some collaborative and community-based natural resource management efforts have been institutionalized in quasi-governmental organizations that give them some standing in the local community and some government support, including funding. Examples include watershed councils (see Clark in Gray, Enzer, and Kusel in press, 2001), landowner cooperatives, and coordinated resource management groups that have memoranda of agreement with government agencies (See Cortner *et al.* in Gray, Enzer, and Kusel in press, 2001). The process of institutionalization brings challenges, however. As they become integrated into existing legal and governance structures, collaborative and community-based processes risk losing the flexibility and adaptability that make them accessible to and representative of diverse interests. Evaluation can help us determine what impacts institutionalization has on these processes, and how policies and programs can be structured to avoid the drawbacks of institutionalization while maintaining a politically acceptable degree of representation and accountability.

Conclusion

We are proponents of collaborative approaches who are unnerved by the ways in which collaboration is being portrayed as a cure-all. As many promote collaborative and community-based efforts as a replacement for the scientific management paradigm, it is worth remembering that not long ago, scientific management was being promoted as a new paradigm that would solve all. Clearly it did not; at the same time, no serious student of natural resources would deny that science has an important role to play in resource management. We must do the same with collaboration—recognize it as an essential element, while refraining from seeing it as a cure-all and setting it up for failure, to be supplanted by another oversimplified paradigm.

It is important to ask the hard questions of collaborative and community-based approaches to natural resource management, but at the same time we need to acknowledge the normative stance of and motives for evaluation. While some researchers have called for developing a standard, comprehensive list of criteria that can be used to evaluate any case, this is problematic, since there will always be those who want to evaluate based on alternative criteria and different weightings. Perhaps the most we can ask is that evaluators make the motives for an evaluation, the criteria used, and the relative weightings explicit.

Similarly, there is no one method most appropriate for evaluating these processes; the methods will vary with the questions asked and the scale and type of the evaluation. However, we can build on the existing experience with evaluation, identify which types of evaluations are most appropriate in different situations, and strive to develop broadly acceptable “best practices” for different types of evaluations. We hope that this overview of different approaches to evaluation will serve as a first step in this process.

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Landcare: Restoring Australia's Landscapes

By Susan Moodie, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

This article is a brief synopsis of Landcare. There is a growing body of literature contained in reports, conferences, and academic journals. Interested readers are referred to the brief list of readings and web sites at the end of this synopsis.

Origins

Landcare originated in the state of Victoria in 1986 through the initiative of Joan Kirner, Victorian Minister for Conservation, and Heather Mitchell, President of the Victorian Farmers Federation representing opposite ends of the political spectrum. Their cooperation characterizes the essential nature of Landcare—a willingness to embrace diverse points of view along a wide political spectrum, identify the issues, and then take action. Groundwork for Landcare had been laid earlier through state agency efforts, particularly in soil conservation and forestry. Rick Farley of the National Farmers Federation and Philip Toyne of the Australian Conservation Foundation formed a partnership that

proved highly productive in spreading Landcare throughout the rest of Australia. There are now more than 4500 groups around the country. The movement has spread to New Zealand, South Africa, Iceland, Philippines, Scotland and Wales, and Alberta, Canada. At a post-Rio conference in London, Landcare was named one of the worlds few community environmental success stories.

Principles

Landcare groups are comprised of people sufficiently concerned about environmental and production issues to be moved to action. While groups are encouraged to form on a catchment basis, the ideal unit for restoring land, they tend to convene around social groupings. Groups are voluntary, democratic in operation, autonomous, flexible, multidisciplinary, and action oriented. Because Landcare groups have been included in identifying natural resource problems, learning about issues, and seeking solutions together, individuals and groups have been more willing to assume responsibility and help create viable solutions. Effective facilitation and leadership have been crucial components to creating an acceptable process for involving community and BBQ (potlucks) are an essential social ingredient. Whole farm planning, catchment planning and monitoring are common activities. A key feature of Landcare has been improving access to technology and many landowners are now directly involved in research projects, collecting data and appearing at conferences as joint authors. While the early focus has centered on improving productivity, overall the movement blends environment, economics, and community.

Achievements

More than one-third of all rural families around the nation are now protecting waterways, revegetating lands, restoring areas affected by salt and erosion, and pioneering new farming systems. While tree planting with local species of tree, shrub, and ground cover is still the major focus, many groups are involved in monitoring water quality to improve management of irrigated lands, establishing extensive conservation corridors. Other members raise awareness through written articles, farm walks and field days, and through experiential environmental curriculum. The Coastcare initiative in 1996 parallels rural efforts and has drawn urban dwellers into stabilizing coastlines, removing weeds from bush land, and planting city waterways, parks and streets to create more livable cities. There have been a number of efforts to include urban people in land restoration efforts in rural areas. The Australian Trust for Conservation Volunteers and Olympic Landcare are just two of the vehicles for getting urban people into the country to learn about conservation by doing it. Those involved in Landcare have become highly skilled technically. Access to reliable data and suitable technology has improved decision making by landowners and in some areas, centrally based administrators defer to local Landcare groups for land management decisions.

The movement receives bipartisan political support. The federal government has pledged funding to pay for education programs in natural resources at elementary,

secondary, and tertiary institutions. These funds also assist on-ground works, planning efforts such as Integrated Catchment Management Plans, and the training of Landcare facilitators. Local and corporate businesses have also contributed funds for research and projects. Some businesses have voluntarily bettered federal environmental standards and others donate a portion of profits to Landcare projects. The media has assisted in raising awareness of environmental issues and represents just one of the many strong and creative partnerships forged by Landcare groups. Media interest in Landcare has been pivotal in raising awareness of conservation issues and the Landcare logo is now recognized by two-thirds of Australians.

In Victoria and Western Australia dissolution of the boundaries between land management agencies has eliminated battles over turf and enabled the coordination of policies. Clients receive the benefit of a one-stop-shopping center for natural resource and production issues with extension personnel dedicated to assisting rather than directing from assumed expertise. At the same time Landcare groups have formed large regional networks across state and country to exchange information. While Landcare groups are apolitical, their numbers ensure that their views are heard at the local, regional, and state levels. The Catchment Management Authorities (CMAs), which manage large regional watersheds, grew out of a six-year conversation between government, agency personnel and Landcare groups who defined the boundaries and responsibilities of CMAs.

Recommended reading

Campbell, Andrew and Greg Siepen. Landcare: Communities Shaping the Land and the Future. St Leonards, NSW: Allen & Unwin, 1994.

Chamala S., and K. Keith (Ed) Participative Approaches for Landcare: Perspectives, Policies, Programs. Brisbane: Australian Academic Press, 1995.

Internet

Landcare Australia Limited <www.landcareaustralia.com.au>
The Natural Heritage Trust <www.nht.gov.au>
National Landcare Program <www.landcare.gov.au>
National Landcare Facilitator Project <www.dpie.gov.au/agfor/landcare/org/nif.html>
Secretariat for International Landcare (SILC) <www.silc.com.au>
The Australian Landcare Council <www.dpie.gov.au/agfor/landcare/org/alc.html>
International Landcare Conference <www.nre.vic.gov.au/conf/landcare2000/>

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SESSION VI

THURSDAY, MAY 18, 2000
3:30–5:00 P.M.

EPA'S BROWNFIELDS FACILITATION PILOT: ENTRY, LANDING, AND CHANGING LANDSCAPES

THURSDAY, MAY 18, 2000—3:30-5:00 P.M.

MODERATOR

Lee Scharf, U.S. Environmental Protection Agency, Washington, D.C.

PANELISTS

Lucy Moore, Lucy Moore Associates, Inc.

Susan Podziba, Susan Podziba and Associates

PANEL ABSTRACT

Drawing from the EPA's facilitation pilot program and lessons being learned, this panel will share some of the challenges facilitators have faced after the pilots have either asked for or agreed to use facilitation. We are finding that there are varying levels of entry into these pilots and that facilitators are often called upon to explain and convince people of the usefulness of their services, not just once but many times over as staff and situations change. All of this calls for a neutral professional who is flexible, multi-skilled, and has tolerance for incomplete projects, yet who consistently understands the value of the facilitation process in a complex and possibly ever-changing landscape. A description of all ten EPA pilots will be given with detailed descriptions of two brownfields facilitation pilots by facilitator/panelists. The first, an urban brownfields facilitation pilot in New Bedford, Massachusetts, will be discussed by facilitator Susan Podziba; the second, the Comanche Nation brownfields facilitation pilot, Oklahoma, will be discussed by Lucy Moore, facilitator. Environmental justice issues as well as Native American participation in the ADR process will be included in the panel presentations.

INDIVIDUAL PAPERS

EPA's Brownfields Facilitation Pilots: Entry, Landing and Changing Landscapes
By V. Lee Scharf

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EPA's Brownfields Facilitation Pilots: Entry, Landing and Changing Landscapes

By V. Lee Scharf, ADR Specialist, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency

EPA Brownfields[1] Facilitation Pilots

- Comanche, OK
- Hudson County, NJ
- Milwaukee, WI
- New Bedford, MA
- Ogden, UT
- Portland, OR
- Puyallup, WA
- San Diego, CA
- Shenandoah, VA
- Spirit Lake, ND

EPA Brownfields Facilitation Projects

- Murray Smelter, UT
- Tohono O'odham, AZ
- Co-located Brownfields/Recycled SF Site

Pilot selection criteria

- Already a Brownfields Assessment Pilot
- Response by EPA Brownfields Coordinators and others to August 1998 memo
- Sought to address an array of issues which might be appropriately facilitated
- Geographic distribution as well as an urban/rural balance
- Sought facilitators with significant public participation experience and, if possible, within pilot geographic region
- Pilot members either selected the facilitator or agreed to facilitator suggested by contractor during a telephone convening
- Facilitation, not mediation

Stalled pilots

- Inadequate and/or belated participant identification, especially of community members-at-large
- Environmental Justice issues not addressed early in the process
- Poor communication among participants
- False expectations by participants
- Erratic or changing pilot members
- Loss of pilot momentum
- Uncertain or incomplete scientific data

[1]A brownfield is a site, or portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse.

- Complex timelines
- Complex statutory, and/or regulatory issues
- Federal, state, tribal jurisdiction issues
- Difficult personalities

Pilot landscapes
- The “entry challenge”
- Pilots have a life of their own
- Pilot landscapes change
- The landscape shapes the facilitator

Arizona Common Ground Roundtable

Thursday, May 18, 2000—3:30-5:00 p.m.

Moderator

Mette Brogden, Udall Center for Studies in Public Policy, The University of Arizona, Tucson, AZ

Panelists

Bill Branan, Arizona Common Ground Roundtable

Dennis Moroney, Arizona Common Ground Roundtable

Peggy Rowley, Arizona Common Ground Roundtable

Tom Sheridan, Arizona Common Ground Roundtable

Jim Walsh, Arizona Common Ground Roundtable

Panel Abstract

The Arizona Common Ground Roundtable provides a venue for statewide, collaborative policy dialogue in Arizona. Begun as a small conversation between The Nature Conservancy, some ranching families, and an Arizona anthropologist and historian, the Roundtable has grown to include participants from many interest groups and communities across Arizona. It has focused on land use issues, preservation of open space, and the dilemmas surrounding the breakup of ranches for real estate development. Members of its steering committee, the Core Working Group, will talk about their accomplishments, the challenges of getting their work successfully incorporated into the legislative process in Arizona, and a recent reorganization that incorporates the results of a self-evaluation of the Roundtable's first two years of work.

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Mediating Environmental Disputes Already in Litigation: What Works and What Doesn't

Thursday, May 18, 2000—3:30-5:00 p.m.

Moderator

Michelle Langan, Fleischman, Minker & Langan, P.C., Tucson, AZ

Panelists

John Bickerman, Bickerman Dispute Resolution Group PLLC, Washington, D.C

Stephen O. Kinnard, Eleventh Circuit United States Court of Appeals, Atlanta, GA

Bill Lazarus, Assistant to the Chief of the Appellate Section, Environment and Natural Resources Division, U.S. Department of Justice, Washington, D.C.

Panel Abstract

This program reviews the docket of the U.S. Department of Justice's Environment and Natural Resources Division and its experience with the use of dispute resolution to settle litigation pending in district and appellate courts. As one of the most frequent users of dispute resolution in the Department of Justice, in the context of both court-annexed programs and the use of private third-party neutrals, the lawyers in the Environment Division have accumulated a substantial degree of experience with these processes. This program will focus on both success stories and situations where a dispute resolution process has not succeeded in achieving resolution. The panelists come from varied perspectives; they are the division's ADR coordinator, the department's senior counsel for ADR, one of the nation's most experienced appellate court mediators, and a private mediator with considerable experience in environmental disputes.

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Seeing Sprawl: Urban Growth Modeling in Two and Three Dimensions—Part II

Thursday, May 18, 2000—1:30-3:00 p.m.

Moderator

Wilson Orr, Sustainability and Global Change Program, Prescott College, Prescott, AZ

Panelists

Randy Gimblett, School of Renewable Natural Resources, The University of Arizona, Tucson, AZ

Hoyt Johnson, Sustainability and Global Change Program at Prescott College

Melaney Seacat, Pima Association of Governments, Tucson, AZ

Robert Wilkinson, University of California, Santa Barbara

Panel Abstract

Pressures on local/regional governments to “solve the sprawl problem” while maintaining continued economic growth have become as common as the solutions have become elusive. There is no simple resolution for this debate, and eventual compromise by the affected parties is the customary, and usually preferred, outcome. Anti-sprawl and smart growth advocacy groups compound the challenges with internal bickering over what’s smart and what’s not. Local and regional governments also find themselves at the brink as they work to balance short-term benefits and long-term consequences from current land use decisions. A crystal ball would help, but we don’t have one. NASA, however, is working to apply its space technologies to these very practical and pressing challenges. This program has developed integrated numerical, spatial, and three-dimensional models that generate a range of long-term urban growth scenarios resulting from a variety of growth and development policies. This capability permits communities to test a range of policies/development options to more effectively identify common ground among various interests. Since the models run to the year 2030, in real-time, and can incorporate extreme weather events, users generally begin to focus on long-term consequences to the broader community rather than quick returns for a minority interest. The benefits of this modeling technology as applied to growth scenarios in Gallatin County, Montana, will be summarized.

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From Conflict to Collaboration in Natural Resource Management

Thursday, May 18, 2000—3:30-5:00 p.m.

Moderator

Marion Cox, RE♦SOURCE Associates, Bethesda, MD

Panelists

Audrey Armour, Centre for Collaborative Action, Toronto, Canada

Ann Svedsen, Centre for Innovative Management, Simon-Fraser University, British Columbia

Anneliese Grieve, Centre for Collaborative Action, Toronto, Ontario

Jim Norris, Trent-Severn Waterway, Parks Canada, Petersborough, Ontario

Panel Abstract

This panel will discuss collaboration as a proactive process of stakeholder engagement in natural resource management. Panelists will present three Canadian case studies, which together represent a spectrum of resource management conflict situations. Each case study will illustrate the effectiveness of creating a forum for face-to-face dialogue among resource users and resource managers about shared concerns and common interests in building a foundation for creative collaboration in the implementation of agreed upon, needed resource management actions. The first case will provide an analysis of the recent, highly charged conflict over the logging of an old growth forest in Clayquot Sound, British Columbia, and how that conflict was transformed into a collaborative joint venture between the First Nations, the MacMillan Blodell Logging Company, and a coalition of environmental groups. The second case will describe the efforts of a federal agency to address conflicts inherent in water resource management by creating forums where water resource users and managers can come together to identify and implement needed ecosystem management actions. The third case will demonstrate the application of collaborative stakeholder engagement in the development of plans for a biosphere reserve. The panel members will discuss lessons learned from their efforts to promote a more cooperative approach to resource management. Discussion of the case studies will include the regulatory framework in each situation, how collaboration fit within that framework, factors that fostered and facilitated collaborative action, lessons learned, and the transferability of this Canadian experience to the U.S.

Individual Papers

Addressing Conflicts Inherent to Lake Management: A Regulatory Agency Catalyzing Collaboration with Aboriginal Peoples
By Jim Norris

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Addressing Conflicts Inherent to Lake Management: A Regulatory Agency Catalyzing Collaboration with Aboriginal Peoples

By Jim Norris, Trent-Severn Waterway, Canada, (Department of Canadian Heritage)

What I'll Cover

1. The case: What jurisdiction and why collaboration become the approach
2. Relationship-formation: Values—What are trust-based relationships formed upon? Process—What key factors are needed?
3. Lessons Learned

Synopsis: A heritage canal, part of Canada's National Parks system, manages an extensive set of lakes and rivers in south-central Ontario. The complexities of dealing with land use and water use issues are described from both a cultural and ecological perspective. Within a watershed of approximately 18,000 square kilometers are several million residents, seven First Nations (status Indians), and several nonstatus First Nations.

The damage and destruction of valued aquatic resources are at the center of concern. Losses are ongoing to natural resources such as aquatic mammals (e.g., muskrats), sport fish populations, and also underwater cultural artifacts (e.g., 5,000-year-old wood fish weirs and flooded areas of former pre-European era habitation). Aboriginal peoples are coming into conflict with non-Aboriginals as to the use and protection of these resources.

Traditional approaches of permitting, law enforcement, and planning review/environmental assessment have been ineffective in resolving both the damage and conflicts. Recent downsizing in government has presented additional challenges. Collaboration is seen as a new approach with much promise. This presentation shows a phased approach which is evolving through discussions with local Aboriginals and other community leaders. Consideration is given to the role of each of the types of leaders within the Aboriginal community (political, traditional, clan, tribal, and entrepreneur).

Jurisdiction

The Trent-Severn Waterway

- Prime mandate of navigation (386 km. main channel, 126 dams, and 43 locks—$.5 billion dollars of infra-structure)
- Land and water manager with heritage mandate (Parks Canada, Dept. of Canadian Heritage)

The Trent-Severn Waterway manages water flows and levels throughout much of an 18,000 square kilometer watershed in southern Ontario. The prime mandate of the waterway is navigation. Under the British North America Act (now the Constitution Act of 1867), canals were assigned to the federal government. As a canalized system of natu-

rally occurring lakes and rivers, the waterway is a large area of federal lands and waters in an otherwise largely provincially regulated area.

As Canadian society evolved to place increased importance upon historic and natural features and their preservation, the waterway has become known as a nationally significant historic canal. The Peterborough Liftlock is especially designated as a site of national significance. The marine railway at Big Chute, while not old enough to be considered historic, is nevertheless a nationally recognized site, being the second most photographed feature in Ontario after Niagara Falls! Around the Big Chute railway is a large natural area which also has nationally and provincially significant natural features.

Key Legislation

- Historic Canal Regulations, Dept. of Transport Act
- National Parks Act: Historic Parks and Site Regulations
- Dominion Water Power Act
- Canadian Environmental Assessment Act
- Federal Fisheries Act

The regulations that I and other staff are responsible to enforce are many. The most significant is the Historic Canal Regulations, as I and others have power to seize equipment, exclude the public from specific areas, and to lay information leading to charges against persons contravening the regulations.

Other regulations, from a variety of past organizational changes of which the Waterway was formerly involved, include the National Parks Act, Dominion Water Power Act (under the administration usually of the Dept. of Indian Affairs, with Parks Canada being granted a special empowerment after being removed from that department, and the Fisheries Act).

The Fisheries Act presents some unusual challenges. Formerly, the province of Ontario was responsible for enforcement of the habitat protection provisions. However, a demand of the province for financial compensation for their services was not met by the federal Dept. of Fisheries and Oceans, and Ontario formerly withdrew from enforcement of the Act. As a fallback position, the waterway and some other agencies situated within Ontario have taken over some aspects of the Act, without financial compensation.

Ecosystem Management Concerns

- Decline in water quality and abundance of desirable natural features and populations
- Large watershed and complex issues

Similar to the situation in other freshwater recreational areas of the continent, eutrophication and invasion of exotic species are of major concern. Intensification of land uses and loss of populations of native species are also of considerable concern. Sport fishing has been adversely affected, and the distribution and abundance of natural features are

generally acknowledged as being substantially less than in living memory of many persons.

The 18,000 square kilometer watershed is at the transition between the agricultural lands and deciduous forests, and the Precambrian shield and coniferous forests. The hydrology and changes in landforms are complex.

For example, part of the flows go to Lake Huron and another part of the flows go to Lake Ontario. Some rivers flow northward, whereas others stop flowing during the drier portions of the summer (except for what the waterway releases through its dams to compensate for evaporation).

Situation analysis

- Insufficient funds and lack of will to resolve major ecological issues.
- Long history of uncertainty and overlap in jurisdictions—no one "in charge."
- Growing conflict as to role of Aboriginals in local economy and natural resource use.

In preparation of the management plan for the waterway during the 1990s, it became very apparent that the situation is complicated by several factors, including:

- Insufficient funds and lack of will
- No one is in charge.
- Growing conflict between Aboriginals and some hunter/angler federations.

Conflicts in Canada between Aboriginals and non-Aboriginals have led to violence in the past decade. This is something abhorrent to the majority of Canadians, and deaths at Oka, Ipperwash, and confrontations elsewhere have left many persons looking at what are the fiduciary responsibilities of the federal government.

Principles of Ecosystem Management

- Hierarchical context
- Ecological boundaries
- Ecological integrity
- Data collection
- Monitoring
- Adaptive management
- Interagency cooperation
- Organizational change
- Humans embedded in nature
- Values

Parks Canada has tended to accept the principles of Edward Grumbine in a 1994 hallmark paper published in the journal of biologicial conservation. Indeed, I am aware that examination of candidates for professional positions in the headquarters at Ottawa Hull includes a question requiring naming all 10 principles.

Left brained aspects—the five on the left. These tend to be what science-based staff gravitate towards, and usually end up in more expensive and novel approaches to use of g.I.s., genetics, and other types of scientific research.

Right-brained aspects—the five on the right. Parks Canada, in my opinion, is not particularly adept at many of these. Indeed, the recent report of the Ecological Integrity Panel into the crisis in National Parks seems to confirm that organizational change and increased cooperation with Aboriginals and others are sorely needed.

I have tended to recognize that the value-based principles are very important and sadly neglected.

Weaknesses taking a regulatory approach

- Often an *adversarial* role of permitting, monitoring and enforcement—litigious not proactive.
- *Falling behind*—quality of resource is declining, and public trust isn't increasing—risk of surprises.
- Often a *disconnect* between operational reality, research and planning "investments" and personal agendas at various levels of organization.
- Often *lip service* to sustainable development and other principles—either an "ivory tower in the real" world, or the "flavor of the month" syndrome.
- Start perceiving *people as problems* and not solutions.

Questions that were considered

- Why not a more traditional approach using a regulatory response, e.g., more officers in permitting, review, and enforcement functions. (Doesn't usually work except at extremely high cost of person years and support. Don't have skills and knowledge sets for building trust.)
- Why not more innovative approaches such as ADR involving mediation, facilitation or other interventions which don't necessarily require a regulatory response. (Don't always work, and best suited for rather simplistic situations of clearly defined adversarial relationships. Don't provide synergy or building of a longer-lasting, more enduring form of partnership. Also cost a lot, and can lead to strong legalistic and/or political involvement.)
- Central issue of having others contribute their time and resources, with only start-up funding and some small maintenance funding provided by the Trent-Severn Waterway.

Solution—collaborative alliances

- Phased approach—incremental
- Focus on Aboriginal concerns
- "Bottom up," not "top down"
- Learn as we go, but with professional advice and assistance
- Build around existing programs and initiatives
- Link as much as possible to existing arrangements and funding sources

This is the approach which will be outlined in the following set of slides.

More intuitive than from any particular school of thought. Substantial assistance from Dr. Armour of the Centre for Collaborative Action as we began to undertake the program in earnest.

The approach is adaptive, involves substantial organizational change (which is not accepted openly by all staff), and involves a re-examination of human values and how we interact with the natural and cultural environments.

Three examples will be briefly outlined

- The KEAI (Kawartha Ecosystem Action Initiative) encompassing a 1,800 square kilometer watershed encompassing the Buckhorn Reservoir. Principle partner was Curve Lake First Nation.
- The Mnjikaning Fish Fence at Atherley Narrows, a small area whose core is less than 1 square kilometer and peripheral areas of interest encompass only a dozen or so kilometers; and,
- The expanding role and influence of Metis and others in the Lovesick and Stony Lake area, which has implications throughout the waterway and is also affecting Aboriginal communities elsewhere in southern Ontario.

Reconnaissance and Inaugural Approach: KEAI

- 1,800 sq. km. watershed of Buckhorn reservoir
- Curve Lake FN and concern with winter fish kill, nutrients, shoreline development
- Multi-stakeholder process which became very large

The KEAI was convened because of concerns with winter fish kills and the rampant shoreline development all around the lakes used by Curve Lake First Nation. It received a significant fiscal investment, with cost sharing of both the waterway and the First Nation. My challenge was to provide a “win-win” without conflict. Whereas an underlying conflict was who had rights to harvest fish, the First Nation was willing to undertake habitat protection measures so as to increase the number of fishes for all. They have completed an inventory of several thousand shoreline properties, prepared the data in a web-based application, and will soon be distributing these on CDs to local municipal planners and other officials. The number of participants greatly increased, with over 90 persons participating as the meetings gained momentum. Unfortunately, several factors became evident:

- Political involvement of the First Nation, but missing where consensus of elders and other leaders of their community;
- Many non-Aboriginals were more curious than willing to actually be open and fully participate. Indeed, some just came to be seen and to learn how they could conduct their own version of the process, and were not willing to actually explore collaborative relationships; and,
- Issues tended to be highjacked by the more eloquent and vocal participants.

Complete Collaboration: Mnjikaning Fish Weirs

- 5,000-year-old underwater fence for trapping fish
- Meeting place with spiritual significance
- Neglected as a National Historic Site
- Tourism and stewardship opportunities

The second collaborative exercise is ongoing and closely involves the elders and some community leaders of Mnjikaning First Nation, along with political leaders of adjacent municipalities. Indeed, at some meetings we would have a quorum of the Council of the City of Orillia.

The site is also of spiritual significance —my challenge was to encourage protection of the natural environment as part of honoring and protecting the spiritual features.

From a personal perspective, it was a very pleasant and interesting experience, with friendships emerging. It moves forward largely on the basis of what each of the members brings to the circle, and has many disparate leaders depending on the specific topic and need.

In-depth: Metis, SCUBA Divers, and Stony Lake

- Looting of underwater cultural sites—enforcement not practical
- Metis have leader of high energy and interest willing to take action
- Encouragement to other SCUBA divers re stewardship
- Expansion to Stony Lake and wider set of values

The third example involves the Metis, who had not been intensively involved in either of the two previously mentioned cases. A leader of the Metis with incredible energy and enthusiasm has spearheaded a strategic alliance with SCUBA divers and the general dive community so as to implement not only standards for protection of underwater Aboriginal artifacts, but conduct a multiyear inventory of sites where these artifacts occur.

Since start-up a little more than a year ago, the Metis have also begun to collaborate with local cottagers whose associations share similar concerns as to the state of the quality of the lakes. They have also catalyzed involvement of Elders and political representatives of status First Nations into the protection of several upland sites, and been a major factor in repatriation of human remains and relicts from several research institutions.

Stages in relationship development

- Wake-up: conflicts and fiduciary responsibilities
  —Values: legal, cross-cultural (economic, ecological, social).
  —Who else in organization was dealing with these?
- Reconnaissance and inaugural approach: Curve Lake First Nation (KEAI)

—Watershed convening of meetings leading to initial dialogue, learning, and potential actions.
- Focused collaboration: Mnjikaning fish weirs
  —Taking action with Elders, other community leaders.
- In-depth and widespread collaboration: Metis, SCUBA divers, Stony Lake cottagers, local post-secondary educational institutions

Recapitulation of Collaborative Process

Strategy for collaboration (phased manner, complex Issues)
- Start small: Attainable goals, single issue, few stakeholders, and only a subset of area of jurisdiction.
- Build on success: Find connections to other problems/issues/concern of mutual interest. (Use lateral thinking, and always look for "win-win".)
- Expand forum: Larger scope (geographical, technical, number of stakeholder groups, issues).
- Continue to build on success: Communicate with strategic thinkers and explore their ideas.
- Develop joint projects: Bring in others and begin to address deeper, underlying conflicts, and develop joint actions through incentive of common values.

Key factors to successful collaboration
- Think "outside the box"—e.g., period of downsizing, and other jurisdictions decimated, no longer an issue of "Who should do what," but rather, "Who can do anything?"
- First Nations leaders played crucial bridging role.
- Skilled professional facilitator, preferably perceived as a member of the community or sharing values.
- Willingness of all key stakeholders to establish personal relationships leading to trust.
- Regulatory issues being resolved through planning and actions—not requiring law enforcement.

Summary: Key Factors to Successful Collaboration

Values to consider: Aboriginal community
- Religious: spiritual vs. Christian
- Cultural: historical vs. spiritual vs. recreational
- Economic: jobs, trophies, and control ("ego") vs. respect, stewardship and sustainable ("eco")
- Social: Internal tensions within community

Some unexpected lessons, not apparent when cross-cultural training, was initiated prior to undertaking extensive relationship building with local Aboriginal communities.

The role of religion is a significant consideration. The preference of government has been to deal with the political representatives—Chief and Council as elected by the inhabitants of each local First Nation. Yet, where traditional values are strong and the

Elders are strongly revered, there is a strong religious element of Aboriginal spirits, ceremonies, and story telling. The involvement of government representatives may be complicated where the Aboriginal community is split as to the Christian and traditional values, and which takes precedence and receives consideration in a public manner.

Economic factors are complicated where a particular clan has had a strong role in job creation and obtaining economic benefits, but not in matters beneficial to the cultural or natural resources. Another consideration, just as in our society, is the difference between “ego” and “eco” when values and personal agendas are being considered. And social tensions which exist between interclan history are always an undercurrent that cannot be ignored when significant issues are being discussed which fall into traditional roles of clans.

ADR and the Waters of the Akwesasne

Thursday, May 18, 2000—3:30-5:00 p.m.

Moderator

Stephen Garon, Marasco Newton Group, Arlington, VA

Panelists

William David, Marasco Newton Group, Arlington, VA

Panel Abstract

The Mohawks of Akwesasne have maintained a relationship with the St. Lawrence River since time immemorial. In the past two centuries, this relationship has been altered and degraded by foreign encroachments and developments. The interests of the community were often set aside in the race to complete developments such as the New York Power Authority's Moses-Saunders Hydroelectric Development or the St. Lawrence Seaway. Recent years have seen changes in the attitudes of the American and Canadian governments, which now seek the input of the community of Akwesasne on the continued operation of such developments. Set against the backdrop of a dam re-licensing process, panel presenters will discuss the challenges of using ADR to resolve natural resource issues involving American Indians. Specifically, panelists will focus on the re-licensing process of the Moses-Saunders Power Dam on the Saint Lawrence River and analyze the challenges involved in developing a process that meaningfully involves the community of Akwesasne. The panelists will make recommendations for constructively engaging the people of Akwesasne in dialogue based upon knowledge of the community and research from cognitive theory. The panelists will offer recommendations for better engaging indigenous communities in consultative processes.

Panel Summary

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Panel Summary

What are the assumptions and/or theoretical models that should direct a stakeholder involvement or dispute resolution process involving American Indians and natural resources? Are existing models and current practices up to the task? To what extent are they capable of "pushing back" against institutional structures (such as an administratively defined problem or decision process) and incorporating the concerns of all stakeholders when some of the concerns (e.g., cultural use of resource, cultural significance of resource, unresolved land claims and historical grievances, etc.) do not map well onto the established problem definition or preferred decision-making tools or strategies? Can interest-based stakeholder models adequately assess how parties socially construct and accommodate very different problem definitions? If interest-based models aren't sufficient, what other models might work? Values? Worldviews?

This panel presentation is based on the premise that good theory drives good practice. Acknowledging that there exists a gap between the tacit or craft knowledge of many practitioners and the state of theory as expressed in the conflict resolution or environmental dispute resolution (EDR) literature, the panelists will discuss the challenges of using EDR processes to resolve "natural resource" issues involving American Indians. Specifically, panelists will focus on the re-licensing process of the Moses-Saunders Power Dam on the Saint Lawrence River and analyze the challenges associated with developing a process that meaningfully involves the community of Akwesasne. From these discussions, panelists will offer recommendations for better engaging the community of Akwesasne in particular, and indigenous communities in general, in third party EDR, or consultative processes.

This panel presentation will discuss the importance of social constructionist theory in addressing environmental disputes and apply these principles to Moses-Saunders re-licensing process, especially as it pertains to the community of Akwesasne. Panelists will 1) review some of the unique qualities of environmental disputes that influenced the establishment of the EDR field; 2) discuss the basics of social constructionism and the cognitive dimensions of conflict and their implications for EDR practice; 3) present information on the challenges posed by the Moses-Saunders re-licensing process; and 4) offer some recommendations for practice.

Agency Experience in Utilizing Facilitated Dialogue and Other ADR Techniques to Manage Public Conflict in the West

Thursday, May 18, 2000—3:30-5:00 p.m.

Moderator

Ric Richardson, School of Architecture and Planning, University of New Mexico

Panelists

William Maxon, Southwest Strategy, Albuquerque, NM

Thom Corcoran, ESI Communications, Portland, OR

Richard C. Collins, Institute for Environmental Negotiation, University of Virginia

Panel Abstract

Over the last decade, federal agencies have had more experience with using consensus building and ADR services to assist in resolving environmental controversies. This growing body of knowledge is valuable to mediation and facilitation practitioners as well as to managers and local officials. This panel highlights how several federal agencies have used third parties to build consensus about regulatory and development policies in the West. Representatives of federal regional agencies will discuss their experience with the use of assisted negotiation, facilitation, and mediation in creating public dialogues about resource allocation and land management practices. The panel also highlights the dynamics of using these consensus-building services. In describing case experiences, panelists will outline the regulatory and political context to employ ADR services as well as identify key issues and highlight the outcomes in the case. How were third parties identified? How were the services selected, procured, and evaluated? What was the agency relationship and experience in working with the provider? How did these dynamics affect the outcomes? The panel will discuss how these similarities and differences inform us about the use of consensus building and ADR services.

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ADR Program Development: Lessons Learned

Thursday, May 18, 2000-3:30-5:00 p.m.

Moderator

Zell Steever, Conflict Management Service, Bureau of Land Reclamation, Washington, D.C.

Panelists

Steve Hartmann, Bureau of Land Management

Jeff Knishkowy, Conflict Prevention and Resolution Center, U.S. Department of Agriculture

Eric Thor, Arizona Agriculture Mediation and Finance Training Program, Mesa, AZ

Robert Ward, Conflict Prevention and Resolution Center, U.S. Environmental Protection Agency, Washington, D.C.

Panel Abstract

Panelists will discuss efforts to develop and improve ADR programs to address natural resource issues. Representatives from several agencies, in different stages of development of natural resource ADR programs, will share their experiences and perspectives, including obstacles encountered, lessons learned, and success stories.

Individual Papers

ADR Development for Rural Areas: Lessons Learned
By Dr. Eric P. Thor, S.A.M., and Aninditta Savitry

Conflict Management Service and ADR at the Bureau of Reclamation: Cutting the Cost of Conflict—Lip Service to Full Service!
By E. Zell Steever

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ADR Development for Rural Areas: Lessons Learned

By Dr. Eric P. Thor, S.A.M., and Aninditta Savitry[1]

Overview

After twenty years of Ag Mediation's assistance to the American rural areas, there are a number of key developments which I would like to highlight for the Bureau of Land Management and others interested in mediation and dispute resolution. These include background, law, and efforts by states and federal government to focus on mediation as a way of settling disputes. Finally, I would like to enumerate the lessons we have learned.

Background

In the transformation of resource-based communities to market-based ones, disputes over land, economic systems, environmental resources, and financial fortune can be a serious impediment to growth and societal progress. In the rural areas, the rule of law is not always an accepted way of settling agricultural, commercial, civil, and other kinds of disputes.

Mediation, alternative dispute resolution, peace making and arbitration are techniques that can help solve these disputes. This is particularly true where the "rule of law" or courts cannot or will not be able to solve issues quickly, economically and efficiently for all participants. Historically, rural alternative dispute resolution grew out of farmers' and ranchers' disputes, which could not be resolved by the existing institutions. In the U.S., over 70 percent of disputes referred to mediation are solved to the satisfaction of all parties. No party wins all but on the other hand, no party loses all either.

In Arizona and 25 other states, rural mediation centers currently are operating successfully. This has significantly slowed appeals and litigation in certain important areas. Today around the world, mediation and similar techniques are used in trade matters, cross border issues, land issues, health determinations, divorce, and a wide variety of other issues before the courts, government agencies, and health organizations.

In the U.S. there is a Federal State Partnership program to develop ag mediation. Section 502 of the Agricultural Credit Act of 1987 (P.L. 100-233) authorized the Secretary of Agriculture to help States develop the Department of Agriculture's (USDA) Certified State Mediation Programs and participate in those programs. The Farm Service Agency (USDA) through its Executive Director for State Operations (EDSO) administers the program.

State mediation programs assist agricultural producers, their creditors, and other persons directly affected by the actions of the USDA to resolve disputes, thereby reducing

[1] Dr. Eric P. Thor, S.A.M. is a professor and State Director of Ag Mediation and Finance Training Unit at ASU East, and A. Savitry is Project Coordinator of Indonesian Rural Alternative Dispute Resolution Unit and a graduate student at ASU.

participants' costs associated with administrative appeals, litigation, and bankruptcy. The USDA Mediation Program gives farmers and ranchers a confidential way to work out distressed or delinquent loans. Agricultural mediation is a way of settling disputes within a producer's own means. The program provides a neutral mediator who can sit down with the parties or work over the phone to resolve very problematic issues. Instead of years for a case to filter through the courts, mediation generally takes only a few meetings to complete.

A critical feature of mediation is confidentiality in working out differences concerning farmers' and ranchers' business operations. Mediation documents are not to be used for any other legal action. This is one of the key requirements for state mediation certification. Confidentiality is the key to making mediation work.

Historical Development and the Law

As a result of the problems throughout the rural areas in America, the federal government authorized the Agricultural Credit Act of 1987. It was based on a number of state programs located principally in the Midwest. A series of matching grants for state formulated programs was established at that time. Today there are 25 different programs in 25 states. The Food, Agriculture, Conservation and Trade Act of 1990 (P.L. 101-624) extended this authority through FY 1995. The Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994 (P.L. 103-354) refined the program. The Agriculture Credit Improvement Act of 1992 (P.L. 102-554) also redefined the roles of states and federal agencies in this partnership. Section 282 of the 1994 Reorganization Act expanded the program to include wetland determinations, conservation compliance, agricultural credit, rural water loan programs, grazing on national forest system lands, pesticides, and other issues the Secretary of Agriculture deemed appropriate. Today Congress is strongly supportive of this system and has increased financial support as a way of assisting rural areas in the financial challenges of the new millennium. The BLM has participated in many of these mediations as an agency that has been directly affected by the challenges of farmers and ranchers in rural areas. Today for all adverse decisions, Section 275 of the Act required that if a USDA Certified State Mediation Program is available as part of the informal hearing process, the appeal participant will be offered mediation.

What is Rural Mediation?

Mediation is a process in which a trained, highly respected and impartial person—a mediator-—helps people look at their mutual problems, identify and consider options, and determine if they can agree on a solution. A mediator has no decision making authority. Unlike a judge or an arbitrator, a mediator cannot decide what is right or "make" anyone do anything. Successful mediation is almost always based on the voluntary cooperation and participation of all the parties.

USDA enters mediation to explore all available options to help agricultural producers, their creditors, and other persons directly affected by the actions of USDA to resolve

disputes and reduce costs associated with administrative appeals, litigation, and bankruptcy. USDA representatives try to set a positive, constructive tone and encourage others to do the same in order to provide a positive atmosphere for good settlements.

How Does Mediation Work?

Any affected party at any time can request mediation, but it usually takes place after a USDA official advises the their customer that a mediation option is available before taking formal adverse action. The customer may request mediation service or waive the opportunity to use it.

If mediation is requested, state mediation officials contact the requesting party to get a complete list of potential participants and their addresses and suggest steps the participants should take to prepare for mediation. The mediation service then assigns one or more mediators to the case. Participants may select or eliminate the mediators offered by the mediation service.

Once a mediator is selected, all potential participants are advised that a mediation process can be undertaken. If a meeting is scheduled, the parties are informed of the time, place, and nature of the mediation process. Ground rules are set to ensure that the meeting is productive.

Once an agreement is reached, the mediator makes sure that it is in writing, is signed and made available to all participants. If an agreement is not reached, the case is closed, all parties are advised of the outcome, and all remain free to pursue other legal courses. Mediation does not favor one side or the other, but helps both consider their situation. The main idea is to provide a low-cost alternative to expensive and lengthy litigation or bankruptcy.

Certification of State Mediation Programs

The U.S. government has a special procedure to help states develop mediation services. Under Federal Regulation 7 CFR 1946, USDA officials determine whether a State program meets the following requirements:

1. By August 1 of each year, the governor or designated state agency head must notify the USDA of its interest in being certified and eligible to receive matching federal support funds for the state mediation program.
2. Mediation services must be provided to agricultural producers, creditors, and other persons directly affected by USDA actions to help them reach a mutually agreeable settlement of their disputes.
3. The program must be authorized or administered by an agency of the state government or by the governor.
4. Training and certification must be provided for mediators. Neutrality and familiarity with the problems are a must.
5. Confidentiality of the mediation process must be assured.

All lenders and borrowers of agricultural loans and people directly affected by USDA actions must be ensured of adequate notification of the mediation services available.

Each of these represent a lesson learned and is the key to the high success rate of the program

State Supplemental Mediation Agreements

Each state can refine the process. Once a state's agricultural mediation program is certified the USDA and state director jointly develop an agreement with the governor's state mediation officials and other USDA participating agencies. The agreement will describe how the affected agencies will participate in the program. The USDA SED confers with the State Attorney General's office, all affected USDA agencies, and farm and ranch organizations who are interested in development of the State's certified mediation program and affected departments of state governments, to ensure that all interested parties have an opportunity to participate.

The agreement will contain the essentials of the state mediation structure, procedural guidelines and forms to be used in the mediation process. The regional office of the general counsel then reviews the agreement. See Appendix 1 for a state by state list.

National Performance

The USDA Agricultural Mediation Program was cited for efficiency and effectiveness in the Vice President's Report of the National Performance Review, *Creating a Government that Works Better and Costs Less.* The program was singled out as an example of activity, which other federal agencies could use as a model.

The National Association of State Departments of Agriculture (NASDA) passed a resolution supporting the expansion of agricultural mediation. NASDA further urged the expansion of mediation to include other federal agencies that play a role in land and resource management, including the Department of the Interior and Army Corps of Engineers.

What Are the Lessons Learned?

There are several key lessons learned during the past two decades of this program. They include:

1. A federal-state partnership works. Before 1987, states were party to over 20,000 litigations against USDA agencies. This program has enabled the states and federal government agencies to work together with the difficult restructuring and bankruptcy cases. The taxpayer does not have to pay twice.
2. Farmers and producers have an important option. In 80 percent of the cases, no appeal has been filed nor litigation started. Each litigated case costs around

$80,000 according to government estimates. This suggests around $14 million has been saved by the government and participants. Subtracting out the current costs for state and federal appropriations, participants, and their counsel it suggests a savings from all parties of a range of between and $14 and $16 million per year. See discussion of savings and costs in Appendix II.

3. Both federal and state governments can participate and adapt the process to each state's needs. The attorney general and agricultural and environment agencies can refine the process. This means senators and congressmen find this an important part of the program.
4. Training and certification must be provided for mediators. Neutrality and familiarity with the problems are a must for the mediators. Each participant and party can "pick" a neutral party from a roster maintained by both the federal and state organization.
5. Confidentiality of the mediation process must be assured. This means that the findings by the parties are not part of the legal process but a voluntary process.
6. All lenders and borrowers of agricultural loans and people directly affected by USDA actions must be assured of adequate notification of the mediation services available. This means banks, and other federal and state agencies, have a right to seek a solution.
7. The success of mediation is expanding to both the public and private sector. Use of trained mediators is effective in many cases as an important tool for dispute resolution both in the U.S. and globally. Recent major mediations in the high technology area, Middle East peace process, and emerging markets are key to reaching solutions to important issues.

Appendix 1: Certified State Mediation Program Contacts

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Appendix II: Costs and Savings by Mediation

Cost of Programs

$2–3 million U.S. appropriation plus overhead
State costs including cost share $750,000
Participant costs equal $1000 per case or $2.4 million
Thus, $14–15 million in savings annually

Savings

3000 cases from USDA estimates and state annual reports
x 80% success rate
2400 cases reach successful conclusion of no appeal

2400 mediation cases
$80,000 per USDA per IG inspector estimates
$19,200 for the U.S. government

A similar savings for state, participant, and other institutions—$19.2 million

Conflict Management Service and ADR at the Bureau of Reclamation: Cutting the Cost of Conflict—Lip Service to Full Service!

By E. Zell Steever, Conflict Management Service Coordinator, Bureau of Reclamation, U.S. Department of the Interior, Washington, D.C.

Introduction

During the spring of 1999, on the heels of nine years of effective alternative dispute resolution (ADR) in the workplace at the Bureau of Reclamation, Commissioner Martinez signed a new comprehensive policy on conflict management and alternative dispute resolution. The new policy expands and encourages use of ADR in all activities of the Bureau of Reclamation (Reclamation).

Today, I will provide an overview of Reclamation's new Conflict Management Service and ADR Program. I will describe Reclamation's *vision* for ADR and how natural resources issues are considered along with all other activities. I will describe the strategy Reclamation has adopted to build *capacity* and *support* for collaborative interest-based processes for *assessing, preventing, managing,* and *resolving* conflict for all activities within the bureau, as well as with our customers and our partners. Finally, I will describe how we intend to encourage and promote *appropriate use* of ADR as a *standard business practice* so that we can "cut the cost of conflict" and be effective and efficient federal water managers in the West.

Background

In recent decades our nation has become more litigious, the number conflicts has sharply risen and become more costly. Often much of the blame for increased conflict can be assigned to the federal government. In the case of Reclamation, we have spent over 90 years developing the water resources of the American West. Today we have 352 major dams, provide water to 32 million people, are the 8th largest electric power producer in nation, and we provide irrigation water for 10 million acres of farmland. We have more than 8,000 long term water contracts with water district, municipalities, and other organizations throughout the 17 western states. With increasing demands for water for endangered species, environmental interests, and recreational purposes, we find ourselves today as federal water resources managers in a very different role from that of the "big dam builder era." Most water has been developed in the West, and so Reclamation enters the beginning of a new century with conflicts and disputes over water use on the rise.

We have all manner of conflict. Reclamation's conflicts range from internal workplace disputes to labor/ management concerns and EEO complaints among and between our nearly 6,000 employees. External conflicts range from water contract and construction contracts disputes to environmental issues such as dispute over endangered species (salmon in the Pacific Northwest, as just one example), to conflicts with other federal

agencies, Native Americans tribes, state agencies, and even with our bordering nations of Canada and Mexico. Up to the present time, Reclamation has often used legal avenues and federal funds to resolve external disputes. In some cases, Reclamation has simply attempted to avoid the issues.

Reclamation is an agency with hundreds of laws to administer, with few regulations to knit its responsibilities together, and with few administrative or regulatory processes to resolve issues. As a result, the difficult conflicts, particularly external ones, are typically resolved, case-by-case, by political or court-directed solutions or activities, often leaving one or more of the parties (including Reclamation) unsatisfied, resources degraded, and the tax-payers often poorer.

Reclamation and ADR: In today's politically correct lingo, Reclamation has been "downsized—do more with less" and we are now "customer driven," yet we currently have little ability to effectively and efficiently resolve disputes, outside of seeking costly court or congressional- directed resolutions. Reclamation's new ADR program, the Conflict Management Service, is designed to look at the alternative ways to *assess, prevent, manage* and *resolve* disputes in <u>all</u> our activities by promoting *appropriate voluntary use* of ADR processes *as a standard business practice.*

Reclamation's ADR policy: What is Reclamation's strategy to make this happen? The concept is to move forward on three "fronts." First, we have outlined a *vision* for Reclamation based on the authorities set forth in the federal ADR law. Our *vision* is a short, four-page policy statement and directive, attached at the end of this paper. Second, we are developing a *capacity* to deliver ADR services, efficiently and effectively. And, third we are working on developing *Support* for *appropriate voluntary use* of ADR within the agency and with our customers.

Reclamation's model is derived from the Program Success Model (PSM) introduced at the Kennedy School of Government at Harvard University. The PSM universally applies across government, industry, NGOs, and other types of enterprises. This model predicts that for any program to be successful, one needs to have: a *vision*, a *capacity*, and the *support* integrated and balanced for a program to work and be effective. If you break or shorten one "leg" of the model (thinking about a three-legged stool) the program will become unbalanced, and the PSM model predicts program failure will generally follow. (The JFK School of Government thinks of the PSM as three overlapping integrated rings.) In this paper I liken the "three rings" to the "three legs" of a stool. So when building a new ADR program such as ours at the Bureau of Reclamation, it is much like building a new three-legged stool to sit on at a high crowded counter of hungry people! It is simply difficult to build like a three-legged stool while everyone else just wants to eat at the high, already crowded counter. So, let me describe for you the building of the "three legs" of our ADR program at Reclamation—the *vision, capacity and support*.

The vision: The need clearly exists in Reclamation to resolve disputes and conflicts in more effective and efficient ways. This need has been documented by many observers. Congress has authorized federal agencies to use ADR, and there are now a number of

federal statutes that support and encourage federal agencies to use ADR. In addition, the administration supports and encourages agencies to develop and use ADR processes. The President has signed several Executive Orders on the use of ADR and has requested the Attorney General to work with agencies to promote use of ADR processes, where appropriate.

At the agency level, progress is also being made. In Reclamation's case, the Department of the Interior established a general ADR policy for all bureaus in 1996. In addition, earlier this year a Workplace ADR Policy and Program, called CORE (COnflict REsolution) was mandated by the department. Now each bureau within the department is required by the CORE Program to provide ADR processes (mediation, generally) for resolving work place disputes when requested by an employee. In the case of Reclamation, we have been providing ADR processes (facilitation and mediation) for the resolution of work place issues for the last nine years with a high degree of success (estimated at 80 percent resolution of issues).

Thus, Reclamation's ADR *vision* has been shaped by the need, the new laws and directives, and our desire to become a more effective and efficient water management agency. Our new ADR *vision* is an outline of where we are strategically headed. Many of the details need to be developed as we gain practical experience in the implementation of ADR processes in the various programs within the agency. We generally think one-sized ADR processes will not fit all the different activities of the bureau. In some cases we do not have a clear idea whether ADR will be a useful or even appropriate. For example, what would a partnering agreement even look like for a new employee or for a new support program in Reclamation? The specific details of our ADR *vision* in each program area will be invented by the affected parties as we go forward in time and as we encourage use of ADR in all activity of the agency. Thus, a key element of our *vision* is that ADR will be encouraged in *all activities*, both internally and externally, with all our customers and partners.

Another key element of the *vision* is that ADR processes should be used only when *appropriate*. ADR processes are, after all, just another set of tools and not the only set of tools used to effectively deal with conflict. We expect in the future all Reclamation folks will do an analysis (conflict assessment) each time for each issue to consider which tool(s) best fits the job at hand and use ADR processes <u>only</u> when *appropriate*. The goal is, as a *standard business practice,* to consider use of ADR processes in <u>all</u> our activities. Each a time a new issue comes to the surface, ask the following questions. Is the ADR toolbox appropriate here? Is there an alternative way to move this issue to a result? If there is, what tool(s) might be employed to help move the issue toward a solution. Just as the National Environmental Policy Act's Environmental Impact Statement process is the way federal agencies look at alternative courses of action in "all activities affecting the quality of the human environment," so too, ADR processes should be the way that Reclamation looks at alternative ways to effectively and efficiently resolve conflict—as a *standard business practice*—to reduce the overall costs of conflict.

Reclamation's *vision* is designed to be broadly viewed to includes the following four process elements: *assessment, prevention, management,* and *resolution* of issues, conflicts and/or disputes. For every agency activity or program, Reclamation employees are encouraged to consider if one or more of the process elements might be useful in getting the job done or the issue resolved. For example, if a given water contract has been in dispute for 10 years and court litigation has failed to bring resolution, an outside ADR neutral might be requested to undertake a *conflict assessment* to help the parties to the dispute focus on the interests, or to help move a stalemated dispute to more productive problem-solving activities in negotiations.

Reclamation's *vision* calls for a *voluntary process*. ADR is encouraged—no pressure—we just want results and issues resolved. ADR is a process that must remain voluntary and always evaluated in light of what the alternative process(es) might be to resolve the conflict, taking into account time, resources, cost, relationships, type of conflict, and lost opportunities.

The *vision* calls for a *field-based program* with the assistance being provided by field-based ADR advisors. In order to effectively start our program, overall training and coordination of the ADR advisors is provided by the centrally located Conflict Management Service. Reclamation's ADR advisors are a diverse group of agency professionals who were selected from within the agency and who are being trained over the next two years in conflict management and ADR processes. The ADR advisors are located across the agency in all major program areas and will be available to assist managers and employees with issues, conflicts, and disputes. Their main focus will be in the assessment, convening, partnering, facilitation, and mediation processes. They will also provide information, coaching, and training of ADR processes to employees.

Finally our ADR policy and *vision* focus is on agency *education* and *training* during the next several years. Reclamation's Conflict Management Service is expected to take time to develop and mature in all activities of the agency.

Building Reclamation's capacity: We are committed to developing the *capacity* to deliver ADR services efficiently and effectively in the Bureau of Reclamation. *Capacity*, in our case, is the facility or power to produce, perform or deploy effectively and efficiently ADR services in all Reclamation activities and programs. To do this, Reclamation has created a Conflict Management Service, selected 18 ADR advisors, and provided funding for securing external professional ADR services.

The 18 ADR advisors are Reclamation personnel with the ability and training to help others in the agency assess, prevent, manage, and effectively resolve both internal and external problems and disputes. ADR advisors, when fully trained, will provide Reclamation with the internal *capacity* to use ADR appropriately, increase the comfort level of employees to use these processes and procedures, and promote collaborative approaches as a standard business practice within the agency. Reclamation ADR advisors' functions will be a collateral duty, in most cases. ADR Advisors will continue to work for their respective regional or program offices.

Specifically ADR advisors will be expected to:

- Assist BR staff to anticipate, assess and understand a wide variety of conflicts encountered by the agency and its personnel;
  - —Advise parties to a dispute on how to assess, select,and implement effective ADR procedures to address agency conflicts;
  - —Convene parties to engage in ADR processes;
- Coach parties in effective negotiation strategies and procedures;
  - —Provide advice on effective prevention and partnering approaches and processes;
  - —Help locate and obtain acceptable external neutrals (facilitators, mediators, fact finders, etc.);
  - —Mediate a number of types of common disputes that occur within the agency;
  - —Write documents to assist in negotiations and proposed settlement agreements; and
  - —Maintain up-to-date knowledge of at least one technical area and ADR procedures that may be applicable to resolve disputes in these arenas.

The profile of Reclamation's ADR advisors are people who:

- Are enthusiastic about and interested in helping people collaboratively solve problems, resolve conflicts, and utilize ADR;
- Have relevant government and professional experiences;
  - —Possess strong technical skills and experiences;
- Have a firm understanding of Reclamation and its people;
- Have strong and positive relationships with their peers, superiors and subordinates;
- Demonstrate effective listening and writing skills;
- Exhibit strong problem-solving skills;
- Reflect the diversity goals of the agency;
- Are willing to travel; and
- Are able to work independently with people from all backgrounds and grades.

ADR advisors were selected from personnel across the agency. The process for identification and selection of the 18 ADR Advisors started with a notice to all employees seeking individuals who were interested in becoming ADR advisors. We are very pleased with the caliber and diversity of our new ADR advisors.

While many of the people that were selected to become ADR advisors have experience in ADR, we are providing the Advisors with additional training and professional work experiences in conflict management and ADR. The ADR advisors are released from their normal duties to participate in eight weeks per year of ADR and conflict management training during the next two years—16 weeks of training in total. They are receiving classroom and hands-on practical training, and will work with and be coached by experienced ADR professionals on real disputes. Each advisor is required to develop an Individual development plan and is expected to do an ADR specialization.

As of this date, ADR advisors have completed two weeks of classroom training and will attend three more weeks of training before the end of September 2000. The ADR advisors' training and related travel is paid by the Conflict Management Service while

salaries continue to be provided by sponsoring regional or program offices. ADR advisors work for their respective regional or program offices and are part of Reclamation's Conflict Management Service Team. Development of our internal *capacity* to deliver effective ADR services is in progress. We hope that within the next several years the ADR advisors will have proven to be a good investment for the agency.

When Reclamation is a party to a dispute with other external parties, generally an outside third party neutral is needed. While the ADR advisors are designed to provide internal *capacity*, and assist in the development of *support* for ADR processes within the agency, they do not, of course provide the agency with external professional neutral ADR services. In order to provide the agency with the *capacity* to secure the services of outside qualified ADR professionals, the Conflict Management Service has established a multi-year Government Services Administration's federal supply schedule—management, organizational, and business improvement services (MOBIS) contract with the Marasco-Newton Group. The Marasco-Newton Group is a consulting firm that has available a group of 40-plus ADR firms from across the nation. These ADR firms are available to Reclamation as subcontractors. The MOBIS contract process has proven to be an effective and efficient means to secure external professional ADR services when required and on short notice.

Reclamation has now used the MOBIS contract on two occasions to assist our managers and the other parties in conducting assessments and in convening facilitated multiparty meetings. Both cases are on long standing water contract disputes. Both cases are tough, involving litigation, multiple parties, stalemates, many years of failed negotiations, difficult issues, and difficult personalities. We are optimistic that outside ADR services may be useful in these types of situations.

While Reclamation's *vision* places the prime responsibility of ADR with our agency managers, it is expected that our field-base ADR advisors and our Conflict Management Service team will provide the *capacity* to make the difference in how we do business managing our conflicts and disputes more effectively and efficiently in the future.

Support in Reclamation for ADR: Developing *support* within Reclamation and with our customers is a challenge. While Reclamation has underwritten the cost of ADR training courses for the past decade for many employees, this effort seems to have had little impact. Our managers and some employees have heard about ADR, but few demonstrate they use ADR principles effectively in daily activities and operations. Some employees, for example, are unable to explain the differences between facilitation, mediation, and arbitration. We sometimes hear managers and employees say things like: "I don't want any mediator telling me how to make a decision in this case!"

Reclamation's strategy for developing *support* in using ADR processes is to step back and look for specific opportunities to provide training tailored to the interests and issues relevant to the agency and our managers' specific activities. We are developing examples and cases where ADR has made a difference for Reclamation employees in the resolution of issue(s). We are in the process of finding and packaging our ADR success

stories. Reclamation's ADR training is focused program-by-program and involves specific activities relevant to the specific needs of the parties. We expect we will only be successful when our managers and employees actively participate in the analysis and assessment of the issues (conflicts and dispute), as well as in the design and implementation of effective ADR processes for the issues within their control. We are prepared to provide targeted ADR training for our employees, when requested by managers on Reclamation specific problems and issues. Developing *support* for use of ADR in the agency starts with education and is followed by specific ADR processes that solve specific employee and bureau problems.

We have good support for ADR at the political level in the department and at the bureau. Clearly, strong leadership is key to developing a successful program and that we have. We will continue to need resources and to build outside support with our customers and other partners. This will take time and persuasion. Our marketing will be measured so that expectations do not exceed our *capacity* to deliver appropriate ADR services in an effective and efficient manner.

Summary

In summary, our approach is simple: develop; integrate; and interlock our *vision, capacity and support* (the three legs of the PSM) for alternative dispute resolution processes as a standard business practice in all activities of the Bureau of Reclamation. The lesson is that the three legs of the stool are key to a successful program in the use of alternative dispute resolution processes in preventing, managing, and resolving conflict, when appropriate. The public policy goal outlined here is for the Bureau of Reclamation to "cut the cost of conflict" and become the most effective and efficient federal water manager in the West. The time has come for Reclamation to start to use ADR and move from "lip service to full service."

Zell Steever (202-208-4933) ZSTEEVER@usbr.gov

Evening Plenary

Thursday, May 18, 2000

Navajo Perspectives of Alternative Dispute Resolution
By the Honorable Robert Yazzie, Chief Justice of the Navajo Nation

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Navajo Perspectives of Alternative Dispute Resolution

By the Honorable Robert Yazzie, Chief Justice of the Navajo Nation

Appearing before you today is a challenge. First, while we do have some natural resource cases in our court system, we don't have that many. Second, I get a little upset when I am asked to talk about "alternative" dispute resolution in connection with Navajo peacemaking, because we think peacemaking is "ODR" and not "ADR" In other words, it is "original" dispute resolution and not "alternative" dispute resolution. Navajo peacemaking is an effective means of resolving disputes. In it, rather than have some powerful authority figure make a decision when there is conflict, those who began the conflict and built it up are the appropriate people to make decisions about what needs to be done to end a dispute. That seems strange to many people. We are used to the mainstream method of resolving disputes where the disputants simply lay out their version of the facts and the law to a judge or arbitrator so that person can make a decision for them. That is at odds with the basic principles of Navajo peacemaking, our original dispute resolution method.

A few years ago, I was at a restorative justice conference in Washington, D.C., sponsored by the U.S. Justice Department, and after I told an audience that traditional Navajo peacemaking works well, one participant said, "That's all very nice, Chief Justice Yazzie, but how does it work?" What is there that can move people who are in conflict to agreement to end a dispute? I will tell you some of the principles.

First we ask, who gets it all together? Who helps people come together to talk out their problem? In our tradition, our civil leader is a person called a *naat 'aanii.* In our language, that refers to a person who speaks well. Words and language are very powerful in Navajo philosophy. We believe that as a person thinks, that person will speak. As someone speaks, that will guide one's actions. There is an intimate connection between thought and speech and actions. How do you know how someone thinks? Look at people in your circles of friends and associates. Can you identify that someone who always seems to have answers? I don't mean someone who thinks he or she knows everything and is ready to not only give you an opinion but forces it on you. We have a word for that kind of person in Navajo—it is *'agha 'diit 'aahii*—"the person who pushes out with words." You know, someone who is bossy and tells you what to do. It also means "lawyer." No, I didn't make that up. That is our word for "lawyer" and what it means.

Going back to our person who acts well and whom we trust when we need an opinion on something, Navajos just know who their leaders are. They are people who are successful in their own life. They are those who think well and plan well. Traditional Navajo leaders were usually medicine people who knew the Navajo ceremonies. They are our storehouses of wisdom that help guide our lives. So, we start by finding a *naat 'aanii*—someone whom we trust when we need advice and wisdom.

Navajos reach decisions in peacemaking through consensus. It is difficult to build consensus, isn't it? There are many kinds of disputes where people are far apart. The

greater the emotional investment people have in a given dispute, the greater the conflict will be and the more difficult reaching consensus will become. When emotions run high and people have very strong "investments" in their position on an issue, how do you bridge the gap? The first problem is getting people to commit to the process. I am conscious of the fact that this conference is sponsored by federal agencies, a university center, an institute, and a foundation. Normally, we cannot talk about spirituality and religion when we are using public monies, but I can't avoid that. The Navajo way to get people to accept the process is prayer. We believe that there are holy beings or people who, when you ask them for help, actually come to give you the help you seek. Again, words are important. When you get everyone to commit to a process using words that ask the holy people for help, that helps fix people's thoughts to working with each other. It commits them to the process because they know it is something they must take very seriously.

Another method of getting people to commit to the process is to give them an opportunity to express their feelings. When I am committed to a position, I want to tell someone about it. If I am hurt by an action or think something wrong has been done, I want to tell someone about my feelings on it. In peacemaking, everyone has an opportunity to tell their point of view and express their feelings about it. Sometimes that can be a very emotional and heated process. However, our *naat 'aanii*-peacemaker guides such discussions in a respectful way so that people may begin by simply talking at each other but end up talking with each other. The key is to prompt true communication and not simply give everyone in the room a soapbox.

There is something else that makes Navajo peacemaking work. If you have someone conducting such a peace and reconciliation ceremony (which is how we think about peacemaking) who has wisdom, then that is a very important means of building consensus. As I said, we choose a *naat 'aanii* because of that person's demonstrated talents of wisdom, planning, speaking well, and bearing themselves in a good way. Suppose people talk with each other and don't arrive at a solution. They will then turn to a peacemaker to ask for guidance. A peacemaker doesn't tell people what they must do or should do. A peacemaker will listen to the problem at hand and then tap Navajo traditions about how to deal with it. For example, if the problem is a man and wife in conflict, then the peacemaker will talk about the ancient traditions of how a man and wife must depend upon each other. If there is a land dispute, we have ancient teachings on how conflicts over land were resolved. This is very real to us. Even something very bad can have a point of view. At one point, when monsters roamed Navajoland, killing people, two Hero Twins confronted them. One of those monsters was poverty. Should it be allowed to exist? Poverty pleaded for its existence and pointed out that without it, people would be lazy. They would have no incentive to work and be productive. Poverty was allowed to live. Another monster was lice. It too pointed out its usefulness, because without lice, people would not be careful about how they dress and groom themselves. In the Navajo way of thinking, nothing is all good or all evil in itself—everything has its place and purpose, and sometimes we need to understand that. In natural resource disputes, people will set up the bureaucrat, the developer, or the environmentalist as a monster. What do you do with a bureaucrat, a developer, or an environmentalist? You

ask them their relationship to the problem at hand and their point of view on it. You ask them how they propose to solve the problem and what they can offer to do that. Sometimes it may take a teacher to help explain those things and to facilitate understanding.

Several years ago, a graduate student at a university in Ohio came to visit us to study Navajo peacemaking. After spending some time sitting in on peacemaking sessions and seeing how peacemaking works, she wrote a master's thesis that put it very nicely. She said that often, people go into discussions over a conflict or problem using "head-thinking." Head thinking is our attitudes and assumptions. Too often, we think we are right—all right and not wrong at all. We think that the other person is wrong or wrongheaded. We assume the worst about those with whom we disagree and we make assumptions about them. We assume that the other person is greedy, power hungry, vain, stupid, or what have you. The processes I described to get people to commit to the process, get what they feel off their chest, listen to others, receive teaching on the problem, and talk the problem out does something. According to the student, it moves people from "head-thinking" to "heart-thinking," and that is what prompts consensus. That leads me to the final point about how Navajo peacemaking works.

When you look at the field of law and how it works, you see a lot of head-thinking of a different kind. It is an intellectual process. It uses rational methods of asserting facts and rules of law with the assumption that at the end, the very wise person who listens to the facts and considers the law will make the only rational decision possible in the given case. There is no room for emotion in that kind of process. I am a realist and I have been a judge for many years. I know that it doesn't work that way. There is not only room for emotions in Navajo peacemaking, but it is built on emotions. What is the most important emotion of all? It is respect. How often do you sec respect in a courtroom? Sometimes there is genuine respect for a given judge, but too often, by the time the lawyers have escalated the conflict, the assumptions that the other side is dead wrong and the judge may exercise favoritism or not be too bright are so strong that respect is impossible. In Navajo peacemaking, as you move people from head-thinking to heart-thinking, you try to build the respect that is necessary for people to focus upon the problem and come up with an agreed way of dealing with it.

Does any of this help you? Is Navajo peacemaking relevant to building consensus and resolving conflicts over natural resources? I think it is. Who are the participants in natural resource conflicts? First, there are the agency officers and employees. They propose to make a decision, and the other actors in the process hate it immediately. You can see the assumptions about it immediately, can't you? The others will say, "It's wrong!" "It's stupid!" "It's against the law!" "It's contrary to sound public policy!" and all the rest of it. There are the developers and land users, and you will hear them being accused of greed and a disregard for the land and environment. Then there are the environmentalists, who get accused of ivory tower pride and fuzzy thinking. You hear a lot of head-thinking, don't you? You see what appear to be irreconcilable positions in natural resource disputes, don't you? I will close with a thought about them.

To Navajos, a given natural resource isn't an "it." A natural resource is a "him" or a "her." It is a being. We believe that our major deity, Changing Woman, is Mother Earth. When it comes to a natural resource disputes, there was once a famous law review article that asked the question, "Who speaks for the trees?" Put the question another way: "Who has respect for the trees?" Who honors them and does their best to do what is good for them?

Whether or not my explanation of how Navajo original dispute resolution works helps you, when you think about alternative dispute resolution methods, think about respect. Think about how you can get people to talk, not to but with each other, and how to move the talk from anger and assumptions to shared positions and thinking about the particular resource in dispute. At end; whether you talk about public property and lands or the use of private property, you're not really talking about rights. You are talking about something that is a being. You are talking about something that has worth in its own right. To us, mountains are sacred. We respect them for themselves. The air is sacred. The water is sacred. The trees are sacred. Maybe if we can learn to respect them, when we fight about them we will set aside time to listen to them. No matter what viewpoint we have on a given natural resource, we each say that we take our position because we respect it. Let's encourage that, and perhaps if we show true respect for natural resources, we can find time to respect each other in the process to build consensus about what is best for them.

SESSION VII

FRIDAY, MAY 19, 2000
8:30-10:00 A.M.

Collaborative Land Management and Conservation: The Sonoita Valley Planning Partnership and Las Cienegas National Conservation Area

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

Mary Vint, Sonoran Institute, Tucson, AZ

Panelists

David Bertelsen, Sonoita Valley Planning Partnership

Sheldon Clark, Sonoita Crossroads Community Forum

Mac Donaldson, Empire Ranch

Lee Nellis, Sonora Institute

Karen Simms, Bureau of Land Management

Panel Abstract

The Sonoita Valley Planning Partnership (SVPP) has worked for the past five years in southeastern Arizona to build consensus among diverse stakeholders about a variety of resource conservation and land use issues in the Empire-Cienega Resource Conservation Area and surrounding lands. These efforts are culminating in a collaboratively developed, flexible, multi-use management plan for the area. SVPP's experiences in resolving conflict about public land use and management, endangered species, water resources, and property rights; in managing issues and lands that span multiple agencies; and in coordinating and involving a large group of diverse stakeholders have led to grassroots support for legislation to establish Las Cienegas National Conservation Area (NCA). The proposed NCA would encompass the Empire-Cienega as well as a much larger landscape that comprises primarily state trust lands that are subject to sale and development. The Sonoita Crossroads Community Forum, a nonprofit organization working to promote community stewardship and land use planning in the area, has joined the SVPP and other local groups and individuals supporting the NCA legislation, which, if passed by Congress, will use the SVPP's plan as the basis for management of the NCA. This story can serve as a model approach for preventing or minimizing conflict related to land use management and new protective land designations elsewhere in the West.

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Dueling Scientific Information

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

Sarah Stokes, The Keystone Center

Panelists

Nancy Gloman, U.S. Fish and Wildlife Service

Martha A. Tableman, Martha Tableman & Associates, Keystone, CO

Panel Abstract

At the root of many conflicts are disputes over facts as well as values. While science is seen as being neutral, often the scientific evidence surrounding a natural resource management decision is in dispute. This panel will consider what happens when scientists disagree and how such disagreements become resolved. The perspective of federal agency personnel who are responsible for the decisions as well as observations by mediators who have facilitated such conflicts will be presented.

Individual Papers

The Keystone Science and Public Policy Program
By Sarah Stokes

Approaches For Addressing Disagreements over Science and Technical Information
By Martha A. Tableman, Ph.D.

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The Keystone Science and Public Policy Program

By Sarah Stokes

Role of science

- Why use science in public policy decisions?
  —Provides objective criteria
  —Provides understanding of status quo
  —Provides understanding of impacts
  —Can help illuminate and resolve differing interests

When science disagrees

- Different approaches from different disciplines
- How to interpret data
- Amount of science needed
- Certainty of science

Framing questions

- How critical is the science to the decision?
- What are the other factors influencing the decision?
- What are the true interests at stake?

Approaches for Addressing Disagreements over Science and Technical Information

By Martha A. Tableman, Ph.D., Martha Tableman and Associates

> Whereas the objectives of science may be to attain truth, individual scientific undertakings represent only tiny steps toward truth. Knowledge gained through the scientific method is the accumulation of bits and pieces of reality, voluminous but incomplete, and mediated by the collector. Competing visions of scientifically derived truth can, and often do, coexist.
>
> —Connie Ozawa
> *Recasting Science: Consensual Procedures in Public Policy Making*

Whether addressed through traditional decision making processes or collaborative processes, conflicts arise over disagreements as to the priority given to science/environmental, political, economic, and social values associated with a policy or a specific situation. Numerous other articles and books have addressed the dynamic between these components of conflict. This paper will focus on one component: science and technical information. This component is often viewed as an objective basis upon which to develop solutions. However, as indicated in the quote above, science is not a single truth. As those who have been involved in various conflicts with a scientific/technical component or those who have studied them can attest, science and technical informa-

tion is not an objective foundation for making decisions, but often one of the nexuses of conflict.

Central to many environmental conflicts are questions that revolve around the "science of the issues." These questions can revolve around lack of data, adequacy of data, interpretation of the science, and the implications for policy and management. (A complete list of the types of conflicts over scientific and technical information can be found in the paper, Managing Scientific and Technical Information in Environmental Cases: Principles and Practices for Mediators and Facilitators written by Peter S. Adler, Ph.D.; Robert C. Barrett, J.D.; Martha C. Bean; Juliana E. Birkhoff; Connie P. Ozawa, Ph.D.; and Emily B. Rudin, and discussed at an earlier panel.)

This paper attempts to present a number of approaches that facilitators have used in collaborative efforts to move conflicts beyond the point where disagreement occurs over the science. It is not intended to be comprehensive, but to initiate discussion among practitioners and others on how to address the issue of competing science and technical interpretations. (Please note that many other examples are provided in the paper mentioned previously by Peter S. Adler *et al.*) To prepare this paper, conversations were held with a number of facilitators to glean their reflections on approaches to use. While these approaches were suggested by facilitators, they could be used in a stakeholder process that is not being facilitated by a third party neutral. Key to such use would be that all involved agree to use of the approach.

In considering these suggestions, note that these approaches were used within the context of collaborative or joint problem solving efforts. Central to such efforts is the concept of identifying the "real" interests of those involved. In some situations, just identifying the real interests of concern may eliminate the need to resolve scientific disagreements as a common ground can be found without resolving the scientific issues.

For each approach presented, a brief explanation will be provided, and in some instances, a brief example will be provided.

Agree to Disagree

In some situations, stakeholders can agree to disagree about the scientific basis for developing a policy and still engage in constructive discussions. For example, in the Keystone National Policy Dialogue on Food Safety and Pesticides, parties did not agree that there was a food safety problem associated with pesticide residues in foods. All sides could point to science that supported their viewpoint. Despite that disagreement, all involved recognized that due to public concern, Congress was going to develop and enact legislation that dealt with pesticides and food safety. Thus, the proverbial train was leaving the station. All involved wanted to shape the resulting legislation. As a result, they engaged in discussions to develop policy that was acceptable to all.

In other situations, it was noted that stakeholder recognized that they could engage in lengthy arguments about the baseline information associated with a specific issue or they could attempt to resolve the management issues facing the agency. It was observed that the ability and willingness to agree to disagree often occurs in situations where there are drivers that will force action to happen even if the collaborative effort is not successful. In some cases, it is a lawsuit that will force an agency to act; in others, it is the momentum that will lead to congressional action, and in others, it is the mandate of existing legislation.

Identify Research Questions and Priorities

Many scientific disagreements arise from lack of data, inadequate or questionable data, different interpretations of data, and different evaluation of the importance of data. While recognizing that uncertainty may always be present, in some situations, having a stakeholder group identify research questions and priorities may be a means to redirect the debate over whose science is correct. As a caveat, such an approach will only work where there is the time and resources to do additional research. Additionally, it needs to be determined by the stakeholder group that the resulting information is critical to making the policy decisions.

Such an approach lead to the creation of the Forum for Collaborative HIV Research. During the Keystone National Policy Dialogue on Access to Therapeutic Drugs for Life Threatening Diseases, stakeholders recognized the need for additional research, identified some key research questions to be pursued, and proposed a process where research could be coordinated.

Similarly, an entire chapter is contained in *The Consensus Building Handbook* edited by Lawrence Susskind, Sarah McKearnan, and Jennifer Thomas-Larmer, on joint fact finding. While the HIV example set up a separate process, the examples provided in the handbook illustrate situations where stakeholders, as a part of a collaborative process, together sought to gather additional information. As a part of such efforts, they identified questions to be answered, developed or commissioned the gathering of data, developed common assumptions, jointly analyzed the results, and developed decisions based on the information and insights gleaned.

Use of Experts

A totally separate effort to address the science—In some situations, the disagreement over the science is such that it is beneficial to move the discussion of the scientific issues to a separate forum. In such forums, the scientists can address the various aspects from a purely scientific perspective. Efforts such as National Academy of Science panels that explore the state of the science can be convened to attempt to clarify the science. Such efforts can only be used if there is sufficient time for the separate panel to do its work before a policy decision needs to be made. The Endocrine Disruptors Screening and Testing Advisory Committee (EDSTAC) convened by U.S.

EPA is an example where a separate National Research Council (NRC) Committee was supposed to address the state of the science before the EDSTAC began its work. However, due to delays, EDSTAC had to proceed without the benefit of the NRC report.

Another example of an effort that has been convened to address the science of an issue is the Validation Monitoring Panel currently being convened to address salmon conservation in the Pacific Northwest. The validation monitoring panel is bringing together 20 scientists from different disciplines to consider the complexities of developing validation monitoring programs. By bringing together multiple disciplines and looking across institutions, the intent is to step outside the politics and consider only the science.

An outside panel—Bring a panel of experts representing the different scientific viewpoints to the collaborative process as guest speakers. This provides an opportunity for the stakeholder to hear the different perspectives and ask questions directly.

Establishment of a task group within the collaborative process that addresses the scientific issues—One way to address the debate over science and technical issues is to establish a task group that wants to consider the science and technical issues in more depth and report their findings to the larger group. In some situations, the task group is composed only of stakeholders within the collaborative process. In others, outside experts are engaged to help inform the discussions. For example, in the Assembled Chemical Weapons Dialogue, a group of four citizens from the stakeholder group is working with experts to better understand the various destruction technologies. The experts are paid for by the Department of Defense.

Another variation on the task group is for each perspective to select an expert that they are comfortable with and then the selected experts pick an expert that they can agree upon to join the task group and address the issues in question. Such an approach was pursued in the San Juan mediation where the stability of an area called Slide Mountain and its ability to be logged was in question. The Forest Service and the citizens each selected an expert who selected a third expert to assess the area.

Hire a "trusted" expert—When much of the science and data comes from what is seen by some stakeholders as a biased source, one approach is to provide access to a trusted expert to either develop new data or in many circumstances to peer review the existing body of data. An example is the Denver Metropolitan Roundtable where a grant was received from a local foundation to enable the environmental participants to hire an expert to critique the Denver Water Boards data.

A variation on this approach is Technical Assistance Grants (TAG) used by EPA to assist community groups to better understand the technical issues associated with clean up of hazardous waste sites. The experts hired are not expected to conduct original research but primarily to peer review the data collected by the facility.

Scenarios

In some situations, an approach to move the discussions beyond a debate over the science is the development of scenarios. For each possible policy option, the implications can be presented to determine possible outcomes as well as to determine how much variability will result depending on the scientific assumptions. Thus, insights might be gleaned as to the sensitivity of the policies to the science. In some situations, differing views of the science may not make any difference in the policy choices, thus the collaborative process does not need to devote time and energy to resolving the disagreement over the science. Such an approach was used in the Food Safety and Pesticides Dialogue to explore the implications of different risk values.

Identify Areas where Agreement and Disagreement Occur and Determine the Importance of the Science to the Ultimate Decision

Within the context of the discussions, facilitators have found it useful to ask stakeholders to specifically identify where the science is agreed upon and where there is disagreement. It was observed that this exercise may result in the realization that the areas of disagreement are not as large as might be expected from the overall debate. As a part of that process, a key area to explore is the assumptions behind the science being debated.

Having documented the areas of agreement and disagreement, it was observed that in some situations, participants should be asked to consider how important agreement on the science is to the policy/management decisions that need to be made. It was observed that similar to agreeing to disagree on the science, exploring the importance of the science may result in a conclusion that despite uncertainty about the science, decisions can or must be made. Examples of such situations include the management of snow geese populations. While initially some wanted to debate the factors behind the problem and the degree of damage, it was concluded that action needed to be taken to address the problem. It was decided that as new information was gained, the management direction pursued could be changed. Such an approach is compatible with the concept of adaptive management that calls for establishment of a dynamic system that responds to feedback on the results seem from the management actions taken.

Concluding Thoughts

Disagreement over science and technical issues can lead to environmental conflicts and/or present stumbling blocks to efforts to find solutions through traditional decision-making efforts and in collaborative processes. This paper presents some approaches that have been used successfully by facilitators within collaborative processes. It is hoped that these approaches will provide a starting point for those faced with scientific and technical disagreements.

The Role of Technical Advisors in Resolving Complex Water Disputes

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

John Bickerman, Bickerman Dispute Resolution Group, Washington, D.C.

Panelists

Darcy Bushnell, U.S. District Court, District of New Mexico

David Keller, U.S. Institute for Environmental Conflict Resolution, Tucson, AZ

T. Maddock, Department of Hydrology and Water Resources, The University of Arizona, Tucson, AZ

Panel Abstract

Technical advisors can play an important role in helping to resolve complex disputes where the basis of the dispute may involve highly technical and sometimes uncertain facts. This panel session will explore the use of technical advisors in three highly controversial water disputes. In the Lake Michigan Water Diversion mediation, seven Great Lake states challenged the right of the city of Chicago and the state of Illinois to divert Lake Michigan water in excess to the amount permitted under a Supreme Court Decree. Advisors from the U.S. Geological Survey provided expert neutral advise that the participants to the mediation used in crafting a resolution to this 90-year old dispute. In the Rio Grande River mediation, the Bureau of Reclamation, two irrigation districts, the states of Texas, New Mexico and Colorado, and the cities of El Paso and Las Cruces, and several other parties were ordered by the federal district court to mediate their dispute over the operation, control, and ownership of the Rio Grande River. Technical discussions include the impact of various operational plans; the relationship of ground water to surface water and the flow of this complex water system were at the root of the dispute. In the third case, a special master was appointed to the California state court to oversee assessment and remediation of a hazardous waste site. This site threatened pollution of surface waters and ultimately San Diego Bay. The case was unique in that the special master was an environmental health scientist and mediator who played multiple, sometimes conflicting roles to facilitate resolution of legal, regulatory, scientific, financial, and interpersonal matters.

Individual Paper

The Court Special Master as Scientist and Mediator
By David B. Keller, Ph.D.

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The Court Special Master as Scientist and Mediator

By David B. Keller, Ph.D., Senior Mediator & Program Manager, U.S. Institute for Environmental Conflict Resolution

Case background

- Leaking underground storage tanks
  - —Leaded and unleaded gasoline
  - —Adjacent to storm drain
  - —Conduit to San Diego Bay
- Property owners sue tank owners
- Non-jury trial in Superior Court
- Judge finds tank owners liable
  - —Question of temporary or permanent pollution
  - —Delays in removing tanks
  - —Tank owners in bankruptcy
  - —Judge appoints Special Master
  - —Appointment of health scientist and mediator

Multiple experts

- Engineering
- Chemistry
- Geology
- Hydrology
- Economics
- Accounting
- Public health
- Environmental science

Multiple special master roles

- Court advocate
- Quasi-judge
- Arbiter
- Scientific expert
- Negotiator
- Mediator
- Facilitator

Science in conflict

- Diametrically opposed expert witness testimony
- History of incomplete data collection and conclusions
- Inconsistent data from sampling of ground water monitoring wells
- What will be the cleanup criteria?

Keys to resolving scientific conflicts

- Re: Opposing expert testimony
  —Communicating that both sides skewed in estimates of risk and time
- Re: History of incomplete data and conclusions
  —Finish *complete* site assessment (+2.5 years)
  —Inspect and sample storm drain
  —Rule out drain as conduit of contamination
- Re: Inconsistent data from wells
  —Convene meetings with all parties to agree on future sampling strategies
- Re: What are cleanup criteria?
  —Establish who is responsible for setting which criterion
  —Support reasonable decision making in face of litigation and precedents

What worked to achieve the best results?

- Assigning most qualified scientists and managers
- Reviewing and editing *draft* plans and reports
- Pressing for documentation of new cleanup criteria, including exploration of new theories
- Dissuading use of quantitative risk assessment
- Staying current "real time" on pending regulatory changes and decision making processes
- Informing parties when and how the special master role was changing
- Keeping the overall process moving forward in the face of new and continuing problems

Conclusions

- Site "closed" within 3.5 years with no active cleanup system
- No party ever returned to court
- Precedents
  —Legal: special master as health scientist and mediator
  —Scientific: Defined new category of contamination
  —Regulatory: Developed creative application of existing and pending closure guide lines
  —Negotiatory: Combination of roles of the special master

Introduction

Over the years, special masters have been some of the most used and abused tools of the court. They have also provided fertile ground for experimentation, resulting in what may be some of the most innovative and creative conflict resolution ever devised within the litigious system of the U.S. Special masters are appointed by state or federal judges, are known as "judicial adjuncts," and have been described as judges pro tempore (temporary judges). They therefore have quasi-judicial powers and authority that appear contradictory to many mediators. Special masters may be appointed pre-trial, during trial, or post-trial. While most commonly an attorney, law professor, retired judge, or federal magistrate, special masters can also be scientists, accountants, administra-

tors, mediators, academics, and others with substantive expertise in the area of the dispute.

Judges appoint special masters for many reasons, and sometimes these reasons overlap. For example, in a system where judges are usually inundated with cases, special masters may be simply appointed pre-trial in order to free up the judge to spend more time on other cases. These masters are almost always attorneys. In construction defect litigation, the special master manages pre-trial discovery and facilitates settlement before trial. In divorce cases, a special master makes recommendations to the judge regarding division of assets and child custody. A special master may be also be appointed pre-trial to manage part of a particularly complex case involving many parties and issues that will take years to litigate. The most notable examples are mass personal injury claims arising from alleged environmental or occupational exposure to chemicals.

Depending on their background and needs, special masters may, in turn, assign a deputy special master or hire consultants to work with them. For example, an attorney special master may need to hire a scientist, and vice versa. In any case, the point of entry, duties, and fees of the special master are spelled out in the court's document of appointment, often referred to as the "order of reference." Pre-trial or during trial, fees are often split among the parties. Post-trial, the party found liable usually pays fees.

Special masters may bring to a case one or more conflict resolution skills including those of advocate, negotiator, expert, arbiter, mediator, and facilitator. Special masters have profound professional and ethical responsibilities in managing that portion of the litigation to which they have been appointed. In cases such as environmental cleanups, natural resources allocation, mass tort (personal injury) claims, and reform of public institutions (e.g., schools, prisons, mental health facilities, etc.), special master appointments can endure for many months or years. A special master who brings facilitative mediation skills to the bargaining table is at both an advantage and disadvantage from acting solely as an evaluative quasi-judge or arbiter, the more obvious and common role of the special master. The consensus-building process of parties talking face-to-face and the litigious process of talking through the parties' attorneys do not sit well together. The roles are not mutually exclusive, nor the boundaries clearly defined. A special master is truly taking on a tremendous challenge when trying to play both roles.

In fact, it often becomes even more complicated. A special master may play multiple, overlapping, and sometimes conflicting roles such as arbiter, mediator, facilitator, negotiator, subject matter expert, and court advocate. The special master has an onerous, yet rewarding task in carrying out his or her assignment, *especially* when playing such multiple roles. How does one balance the tensions between these multivalent tasks? What professional and ethical considerations and conflicts ensue? Can they be resolved? These are just some of the perplexing issues the special master may encounter.

Special masters have served in several environmental cleanup cases, including famous ones like Love Canal in New York and the Stringfellow Acid Pits in California. The first

time an environmental health scientist and mediator was appointed as a special master was not until 1993, when the author was appointed to oversee cleanup of a hazardous waste site in California. In this case, the author found himself walking a tightrope among many roles, resulting in a hybrid style of dispute resolution he terms "mediation-negotiation." It was critical to balance the tensions between a negotiator's skill for assertiveness with a mediator's skill for empathy, and the tensions between impartial scientist and court advocate. The crux of the matter was the ability to play multiple, overlapping, and even conflicting roles, without betraying confidence or creating confusion among the various parties and the court, within the overall strategy of resolving the case.

Debate and Controversy Surrounding Special Masters

Considering the unique role of special masters, and especially special masters as mediators, it is no wonder there is continuing debate regarding their use. Overall, there are at least eleven areas of controversy concerning special masters:

1. Does the appointment of a special master result in abdication of a judge's responsibility?
2. Should special masters be held to the same rules of judicial conduct as judges?
3. Should appointments of special masters only be in post-trial applications so that they do not influence the court's fundamental role and responsibility of trying cases?
4. What is, and is not, acceptable ex parte (informal) communications between the special master and judge, and the master and the parties?
5. Should the order of reference (the document of appointment) be worded in generalities to allow special masters to become knowledgeable about the case and develop their role, or should it be as specific as possible to retain close court control?
6. Should the special master be allowed to play multiple and potentially conflicting roles?
7. Should the parties consent to the appointment of a special master?
8. Should the special master be neutral?
9. If the special master's role is that of settlement facilitator, should he or she be armed with the coercive power of the judge?
10. Should the special master deal with power imbalances?
11. Should the special master be allowed to play multiple, and potentially conflicting roles?

Recommendations

The author offers the following recommendations as a starting point for those involved with, or considering the use of special masters in mediative capacities:

1. Optimally, attorneys *and* their clients will have an opportunity to suggest their choices for special master, or at least to review the master's qualifications and fees before the judge makes the appointment. The parties/attorneys can also recommend *to* the judge that a special master be appointed. The court and the parties should be clear on what expertise they really need: Attorney? Subject matter expert? Mediator with process expertise? Mediator with subject matter expertise? Mediator with process *and* subject matter expertise? Former administrator or manager? Other combination of skills?

2. The parties and their counsel should work with the judge and the special master in crafting the order of reference. Ensure that the order includes appropriate details pertaining to (1) the responsibilities and authority of the special master; (2) the hierarchy of decision making (special master vis-à-vis the judge); (3) ground rules of communication (verbal and written), including confidentiality and informal communications between the special master and the court, and the special master and the parties; (4) frequency and distribution of written reports; (5) mediation (or other negotiatory mechanisms like facilitation); (6) how disputes will be handled between the special master and the parties; and (7) provisions for hiring and appointing of additional experts (substantive or process) and staff.
3. Ensure the special master meets separately with each party as soon as possible after appointment to determine positions and interests, as well as to solicit initial strategies to resolve the dispute. Parties should encourage a relationship with their attorneys to be at least co-spokespersons, whether it is in meetings alone with the master, meetings among all the parties, and/or public sessions. Staunch and unrelenting advocacy on the part of counsel, as well as insistence on positional bargaining by the parties can undermine the process a special master-mediator is attempting to implement.
4. Be aware that mediator backgrounds and style differ tremendously. Negotiatory mechanisms fostered in interest-based/mutual gains bargaining almost always result in better long-term solutions than position-based/compromise bargaining. Check the mediator's training, case history, results, and references. For public disputes, ensure the special master has specific qualifications for these types of cases. The reader may wish to refer to "Competencies for Mediators of Complex Public Disputes" and other reports available through the Society of Professionals in Dispute Resolution in Washington, D.C. For environmental conflicts, the U.S. Institute for Environmental Conflict Resolution in Tucson, Arizona, maintains a national roster of environmental conflict resolution and consensus building professionals.

Conclusion

The gears of integrative or mutual gains bargaining do not easily mesh with those of distributive or zero-sum bargaining. It is the intrepid special master who is not content with the machine as it is designed, and goes on to retool the gears, discover new lubricants, or design a wholly different apparatus. The onerous task of the special master as mediator is often rewarded with inventive and enduring solutions to previously intractable long-term conflicts. While debate will always surround the vanguard, the overall success of special master appointments will virtually guarantee their expanding role in American jurisprudence, including complex environmental disputes.

Note: This text is based on articles by the author in the 1997 Proceedings of the International Conference of the Society of Professionals in Dispute Resolution; "Negotiatory Alchemy: The Court Special Master as Scientist and Mediator," published in the October 1997 issue of *Negotiation Journal*; and "Court-appointed Special Masters: Dispute Resolvers?" published in the January 1998 issue of *Consensus*.

Managing Endangered Species and Ecosystem Conflicts

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

Greg Bourne, Public Decisions Network, Cave Creek, AZ

Panelist

Melinda Smith, New Mexico Consensus Council, Albuquerque, NM

Panel Abstract

Two of the most challenging issues associated with natural resource management are endangered species and ecosystems. During the past few years, consensus-oriented processes have been used to address several complex and controversial issues related to these topics. The session leaders have worked on processes addressing species such as the Mexican Spotted Owl, Red-Cockaded Woodpecker, Silver Minnow, and Florida Panther, and ecosystems such as the Big Cypress National Preserve and old-growth forests. These negotiated processes have resulted in both the resolution of conflict and meaningful input to management plans. This session will explore the dynamics and different approaches taken to resolve these issues and extract lessons that can be used for similar approaches in the future.

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Evaluating the Use of Mediation for the Resolution of Land and Water Use Disputes

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

Mieke van der Wansem, Consensus Building Institute, Cambridge, MA

Panelist

Tamra Pearson d'Estree, Institute for Conflict Analysis and Resolution (ICAR), George Mason University

Panel Abstract

Panelists will share their experiences evaluating the use of mediation in land and water use disputes. Throughout 1995-97, the Consensus Building Institute (CBI) conducted qualitative and quantitative evaluation of the use of assisted negotiation in local land use disputes throughout the U.S. over the past ten years. Approximately 400 individuals key participants in 100 cases were interviewed. The cases covered six types of land use disputes: natural resource management, infrastructure design, development and growth, comprehensive planning, facility siting, and environmental cleanup. Information from this evaluation will be used to provide public officials with insight into what they are likely to encounter when and if they use assisted negotiation to resolve various types of land use disputes. The panel discussion will include d'Estree's work on developing a framework and criteria for evaluating the merits of environmental conflict resolution procedures, and methods for organizing such criteria into six conceptual categories. The six categories are: agreement reached, process quality, agreement quality, relationship of parties to agreement, relationship between parties/relationship quality, and social capital. This framework should assist practitioners seeking to identify "best practices" in the field of environmental conflict resolution.

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Implementing ADR into Navy Environmental Practice

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

Carole Houk, Deputy Dispute Resolution Specialist, Department of the Navy

Panelists

Wanda Holmes, Environmental Engineer for Chief of Naval Operations

Bernard Schafer, Office of the Assistant General Counsel (Installations and Environment), General Counsel of the Navy

Marc Swartz, Navy Litigation Office (LITOFF), Office of General Counsel

Panel Abstract

This program will trace the successful and ongoing efforts to implement alternative dispute resolution (ADR) into the environmental practice of a large federal agency regulated by numerous federal, state, and local entities. It will discuss the Navy's environmental compliance based upon regional coordination concepts, vis-à-vis its national security mission. The program will discuss natural resources; legal, practical, and fiscal issues; and success stories, including ADR advocacy training for environmental attorneys and clients within the Navy.

Panel Summary

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Implementing ADR into Navy Environmental Practice

By Carole Houk, BK Schafer, Wanda Holmes, Marc Swartz

Implementing ADR
- Introduction
- Department of Navy (DON) mission
- DON organization
- DON environmental programs
- ADR in the Navy
- Implementing ADR into Navy environmental practice
- Some Navy examples

Introduction

DON mission
- To maintain, train, and equip
- Combat-ready Naval forces capable of
  —Winning wars
  —Deterring aggression
  —Maintaining freedom of seas

DON organization
- HQ
- "Field"
- Navy/USMC
- Navy web site <www.navy.mil>
- Shore establishment
- Regional environmental coordinators
- Operating forces
- International

DON environmental programs
- Pollution prevention and recycling
- Cleanup
- Conservation
- Compliance
- Safety/health
- Marine resources
- Planning
- Ship/air systems
- Technology
- Cultural resources
- Success stories
- Navy environmental web site <www.enviro.navy.mil>

ADR in the Navy
- Substantive areas
- History
- Early efforts
- 1996 SECNAV policy
- Recent efforts

Implementing ADR into Navy environmental practice
- Navy ADR Counsel
- Education of Navy people
- Partnerships with others
- Governmental agencies
- Private entities
- Getting the word out
- Annual report
- Acceptance
- ADR advocacy training

Navy examples
- Remedial project managers, risk assessors, and natural resource trustees
- ADR at hazardous wastes sites

Remedial Project Managers, Risk Assessors, and Natural Resource Trustees

Roles and responsibilities
- Remedial project manager
  —Manage project/make all final decisions
- Risk assessor
  —Develop and/or oversee risk assessments
- Natural resource trustee
  —Provide input on risk assessment

The Navy tiered approach to ecological risk assessment (ERA)
- Phased approach—layers of assessment complexity:
  —Tier 1: Screening level ecorisk assessment—decision criteria (including exit criteria)
  —Tier 2: Baseline ecorisk assessment—two decision criteria (including exit criteria)
  —Tier 3: Assessment of remediation alternatives, including no-action
- Risk Management is included in each Tier

Trustee involvement
- Attendance at project meetings
- Help formulate scopes of work
- Review/comment on work plans/reports
- Involvement in design/implementation of remedy

- Link with other stakeholders
- Consider natural resources in remedy selection and implementation

Natural resource trustees (policy statement)
- If natural resources potentially impacted by Navy releases
  —Involve trustees throughout ERA process, to the extent practicable
- Trustee involvement encouraged in cleanup program
  —Navy is the lead agency.
- Navy and regulators make all final decisions concerning cleanup

Philadelphia Reserve Basin
- NOAA used samples from prior investigations and performed a screening-level ERA (SERA)
- Used CNO ERA policy format
- SERA took only 3 months to complete from internal draft to final draft
  —Cost approximately $15-20K
- Reviewed by state and federal trustees which had minimal comments
  —Cost avoidance of approximately $100K

Philadelphia Shipyard/Girard Point
- Landfill on the Delaware and Schuylkill Rivers
- Risk drivers were SVOCs, PCBs, dioxins, TPH, metals and asbestos
- Trustees' input influenced final remedy selection
- Regulators agreed with vegetative cap in lieu of impermeable cap and geomembrane
- Cost avoidance over $3 million

Naval Construction Battalion Center/Davisville, RI
- Landfill adjacent to Allen Harbor
- CB area discovered in wetlands during remediation of landfill
- Trustees requested 1.5 acres of wetland restoration
- RI Coastal Resources Mgmt Council and U.S. FWS provided wetland restoration design
- Navy Remedial Action Contract restored 2 acres of phragmites-dominated wetland concurrent with remediation
- Cost avoidance approximately $60K

Summary
- Understand role each party plays in risk assessment
- Understand trustee involvement
- Trustees may be good resource for process/ implementation of remedy

ADR @ Hazardous Waste Sites I
- ADR in NPL cleanup agreements (FFAs/IAGs)
  —Partnering process in EPA Regions III & IV
- ADR in non-NPL cleanup agreements
  —FFSRAs with California

- Proposed ADR in cleanup of “closed, transferred, and transferring” military munitions target ranges (NPL and non-NPL)
  —ADR with federal/state regulators
  —ADR with federal land managers
  —ADR with the public at large

ADR @ Hazardous Waste Sites II

- Land use control (LUC) MOA with California
  —Contains model LUC “covenants” giving state “land use restriction” authority at transferring facilities.
  —MOA honors both Navy and CA interests in maintaining LUCs in perpetuity.
- Land use control agreement with EPA & Florida
  —Gives regulator LUC enforcement role at non-transferring facilities.
  —Agreement honors Navy’s ownership and regulators’ interests in enforcing LUCs

Hazardous Waste Compliance I

- ADR to resolve four administration complaints from EPA
  —Alleged violations at Wash Navy Yard/Anacostia Naval Station DC
- Resulted in four signed consent agreements/consent orders (CACOs) between Navy and EPA
- HW CACOs: RCRA storage, notice, fire safety equipment, training allegations, $704K penalties—filed 9/96
  —Year of negotiation before ADR motion filed by Navy, joined by EPA in 11/97
  —EPA pilot program—ALJ as mediator
  —Weekly phone conferences, resolution by 12/97, agreement 5/98
  —Penalty reduction by 90% plus RCRA training requirements form Navy exceeding statutory/regulatory requirements

Hazardous Waste Compliance II

- UST CACOs: notice, recordkeeping, release detection, closure—80 tanks 317 allegations, no initial penalties
  —Most violations moot, compliance tasks underway, negotiations reached impasse over EPA’s assertion of penalty authority
  —ADR motion filed by Navy, joined in part by EPA 1/98
  —Used EPA pilot program—judge as mediator
  —Weekly phone conferences, “homework” for both sides
  —CACOs signed 8/98—no penalty authority asserted in CACO but in cover letter, ghost tank search required, but termination of CACO upon completion and approval
- ADR benefits
  —Saved money and time
  —Solutions to regulatory problems solved cooperatively outside litigation
  —CACOs with benefits/detriments to both parties

The Role of In-house Neutrals in ADR

Friday, May 19, 2000—8:30-10:00 a.m.

Moderator

Elena Gonzalez, Office of Hearings and Appeals, Department of the Interior

Panelists

Gail Bingham, Resolve, Inc., Washington, D.C.

Joan Calcagno, U.S. Institute for Environmental Conflict Resolution, Tucson, AZ

Christopher Moore, CDR Associates, Boulder, CO

Robert Ward, Conflict Prevention and Resolution Center, U.S. Environmental Protection Agency, Washington, D.C.

Panel Abstract

The use of government in-house neutrals to mediate government/private-party disputes is controversial. Can government neutrals be effective or is there an inherent conflict or an insurmountable perception of bias that makes it impractical to establish an in-house neutrals program to mediate natural resource disputes? If government mediation is not an impractical idea, then when can it be used most effectively? This panel of government and private practitioners will explore numerous models of in-house governmental mediator programs, discuss cases where use of government mediators was considered (and in some cases, used), and offer ideas on the role of ADR professionals within government agencies.

Individual Papers

Choosing an Appropriate Neutral
By Joan Calcagno

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Choosing an Appropriate Neutral

By Joan Calcagno, U.S. Institute for Environmental Conflict Resolution

The selection of an environmental dispute resolution or consensus building professional ("neutral") by parties in conflict may well be the first agreement reached among these parties. A successful joint decision in this earliest of steps in an ECR process is critical to the success of reaching future agreements on the substance of the dispute. Experience suggests that getting agreement on the criteria by which the parties will jointly select a neutral can be helpful before reviewing candidate resumes or interviewing candidates. In some cases, assistance by a third party in negotiating the selection can be helpful.

Identify Selection Criteria

Consider what the participants would like the neutral to do. Consider which of the following are necessary, desirable or not desirable and who will decide the appropriate criteria:

- Assistance that is internal or allied or outside of your agency/organization or any stakeholder group—the effect on perceived or actual neutrality, ability to understand the context, ability to handle confidentiality
- Location of the practitioner (Is a "local" the best or someone from "outside" better? Someone who has worked in the region before? Someone who will not have to travel?)
- Experience with or ability to handle a situation/process of this type, size, scope, complexity
- Experience with similar types of substantive issues (i.e., Superfund, endangered species, etc.)
- Experience, skill, or training in similar processes or contexts (i.e., court connected, high public visibility)
- Education or professional experience/background in a particular subject (i.e., certain sciences, law)
- A particular style/approach (evaluative/directive to facilitative); some personal characteristic (communication, flexibility, etc.); references/reputation for competency, neutrality

Additional considerations:

- "Special" requirements, such as language skills and/or interpretation, technical support, logistics and costs (fees, travel, other)
- Cultural differences or disabilities that will need to be acknowledged and dealt with—think of cultural differences more broadly than ethnicity, for example: professional cultures (lawyers and scientists); gender; social cultures (rural and urban); generational culture; etc.
- General availability to take on the project; actual or potential conflicts of interest
- Whether a team of neutrals is desirable given size of the group, complexity of issues or other factors (note that some neutral's hourly fee structure includes work as a team, some charge individually for each member of the team)

Gather Information about Practitioners

- Identify what sources are available for finding practitioners, such as contracts, rosters, your professional networks. Identify what is required for listing with these sources.
- Once you have a "list" of possible candidates, identify what information the process participants want from them, such as a resume, case descriptions, additional materials, fee/general availability info, references. Identify how the information will be gathered and distributed and to whom.

Choose Candidates to Interview

- Determine how well any particular candidate meets the criteria.
- Determine if references will be contacted (recommended), by whom, what will be asked.
- Determine how interviewees will be selected; for example, all stakeholders can reach consensus through a facilitated process or without facilitation, a designated group or sub-committee can select (through a facilitated process or without facilitation), a designated individual can select, a "score/rank" and/or "strike" list can be used to choose interview candidates.

Prepare for the Interview and Interview Candidates

- Determine what and how additional information will be gathered from interview candidates and to whom it will be provided.
- Determine what, if any, information will be given to interviewees before the interview. Determine if questions should be prepared and distributed in advance to participants and to the interview candidates.
- Determine who will participate in and/or be present at the interview.
- Determine how questions will be asked, for example: one person from a script, or each person in "rounds."
- Determine what questions should be asked (see the list of possible interview questions following).
- Determine how much time is needed/allotted.

Select the Neutral

- Determine how the neutral(s) will be selected; for example, all stakeholders can reach consensus through a facilitated process or without facilitation, a designated group or sub-committee can select (through a facilitated process or without facilitation), a designated individual can select, a "score/rank" and/or "strike" list can be used to assist in choosing.
- Determine how well any particular candidate meets the applicable criteria.
- Think about whether the practitioner seemed to have a grasp of the essentials of the situation, used impartial language, asked good questions, listened well, gave good advice on how to proceed, appeared patient and flexible, described a style/approach

likely to succeed in the situation, seemed to “resonate” with the group and whether the interviewee used the interview opportunity to set a collaborative tone.

Additional information about the Institute roster is available from: <www.ecr.gov> and/or
Joan Calcagno, Roster Manager
U.S. Institute for Environmental Conflict Resolution
110 S. Church Ave. #3350
Tucson, Arizona 85701
(520) 670-5299
Fax (520) 670-5530

Possible Practitioner Interview Questions

1. Tell us about yourself and your background.

2. How would you describe your style, approach, and philosophy of (mediation or whatever) process?

3. What steps/tasks/approach would you take in this process?

4. Please tell us about your experience or familiarity with:
   - Endangered species (or whatever) issues
   - Similar political, economic, social, and legal issues
   - Working with parties and situations similar to this; how long the process took; the outcome
   - Resolving disputes involving multiple governmental entities (with constituents), their attorneys, and citizens
   - Disputes in which there is public and press interest and with conducting sessions in an open/public forum
   - Resolution of court connected disputes
   - Broad public controversies
   - Economic/lifestyle/culture in (location of the dispute)

5. What has been your experience with co-mediation (facilitation)? What would be the advantages and disadvantages in this case?

6. What staff, if any, will be assisting you and how will you handle logistics?

7. Are there any potential conflicts of interest?

8. How much do think this will cost?

9. When are you available?

10. What questions do you have for us?

SESSION VIII

FRIDAY, MAY 19, 2000
10:15–11:45 A.M

The Reintroduction of the Mexican Gray Wolf in the Gila National Forest: An Interactive Exercise in Conflict Management

Friday, May 19, 2000—10:15-11:45 a.m.

Moderator

Melinda Smith, New Mexico Consensus Council

Panelists

Caren Cowan, New Mexico Cattle Growers' Association

Wendy Brown, U.S. Fish and Wildlife Service

Judy Cummings, Catron County, NM

Jerry Maracchini, Catron County, NM

Kieran Suckling, Center for Biological Diversity, Tucson, AZ

Tracy Drummond, Catron County, NM

Panel Abstract

The plan by the U.S. Fish and Wildlife Service to reintroduce Mexican gray wolves into the Gila National Forest in New Mexico has caused a range of reactions about the plan and the process of public comment. Environmentalists lauded the plan, since the Gila, a 700,000-acre, cattle-free, and roadless wilderness, is an ideal place to introduce the endangered wolf. However, local ranchers and citizens in Catron County, many of whom are opposed to the plan because of concerns for safety of cattle and residents, have called for a more extensive environmental impact study. Two highly charged public meetings were held in southwestern New Mexico to hear public input to the plan. This session will have panelists on all sides of the issue discuss their views of both the plan and the process used to undertake the plan.

Panel Summary

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Panel Summary

By Melinda Smith, New Mexico Consensus Council

The Mexican gray wolf was completely extirpated in the wild in the U.S. The U.S. Fish and Wildlife Service wrote a recovery plan and embarked on an environmental impact statement, resulting in the reintroduction of the wolf in the Apache National Forest in Arizona in 1998. When several packs of wolves did poorly in Arizona, the service prepared an environmental assessment and after two very heated public meetings in southwestern New Mexico, translocated the wolves to the Gila National Forest in New Mexico. This action has caused division, anger, and bitterness in Catron County, adjacent to the Gila. Most residents in this traditional ranching and logging region opposed the wolves, fearing predation of their livestock or their own well-being. They also resented what they perceived as the federal government making decisions that affected them without clear or adequate public participation in the decision.

The conference session provided the panelists, representing different stakeholder groups in this ongoing dispute, an opportunity to come together in a forum to share their perspectives. They were asked to talk about the reintroduction of the Mexican gray wolf and the public involvement process that took place to translocate the species from Arizona to New Mexico. This was a rare opportunity for these five people, who had never been in the same room together, to educate each other about their concerns.

This was also an opportunity for environmental mediators and public involvement practitioners participating in the session to hear about a conflict in progress and make recommendations regarding how best to address this divisive issue. Finally, panelists had an opportunity to comment on the recommendations and identify the approaches that had potential for making an impact.

What follows is a summary of each panelist's statement of views.

Wendy Brown

Ms. Brown explained the process through which the service wrote a recovery plan for the wolf and maintained the species in captivity. The goal of the plan was to attempt to reintroduce at least 100 wolves into their historic range. The service began a public process in 1991, culminating in an environmental impact statement in 1996. The process involved 13 open house meetings, four public meetings, and a massive public information initiative including a mailing to 6,000 people. This resulted in a decision to reintroduce the wolf as a non-essential experimental population, allowing for management flexibility, including take by private citizens under certain circumstances. Five packs of wolves were introduced to the Blue Range recover area in 1998. It was anticipated that wolves might attack livestock. By late 1999 three packs required management relocation because of conflicts with livestock.

The service undertook the process of an environmental assessment (EA) in early 2000 to look at the effects of relocating wolves to the Gila National Forest in New Mexico. While the EA was not required for the relocation, the service decided to do it as way of

educating the public about the wolf and building bridges to the communities next to the Gila. The process was swift because the packs were in captivity. The Service sent out scooping letters to 1000 people; in turn, it received 9,000 comments. There were two very controversial public hearings in the two most affected areas

The service is looking for help. How can it best communicate with communities who must tolerate the program? Where do they best invest their efforts in bringing the public in? How can the service educate the public about its need and mandate to reintroduce the species, and incorporate the views of a community, which is largely opposed to this. How do they work together to make this work?

Caren Cowan
The position of the Cattle Growers Association is clear: they have been opposed to the reintroduction of the wolf from the beginning. They participated in the EIS process and filed a lawsuit because they felt the EIS was improperly done.

According to the Cattle Growers Association, the recent EA process was flawed for several reasons. First, there was a predetermined conclusion to the process, the introduction of the wolves in the Gila National Forest. Concerns expressed about inadequate prey base and wolves not staying where they were released were superficially addressed and written off. While there were 9,000 comments during the scoping process, the EA came out less than 48 hours after the close of the comment period. How could those scoping comments have been taken into consideration. Who can evaluate 9000 comments in 48 hours? The second problem was that public decisions were being made based on a public process that the public didn't understand. The people who attended the public meetings thought mistakenly that the discussion was about whether to introduce the species in the Gila, when in reality, the input was being sought as to the impact of the reintroduction, which was predetermined. The people in the local areas aren't being considered or recognized. The service is making decisions from a process the public doesn't understand.

Jerry Maracchini
The business of wildlife management is based on conflict, and it is emotionally charged. People take their stands based more on their beliefs and perceptions than facts and reality. The service did an excellent job of soliciting public opinion and held numerous meetings, but they didn't do what they are doing here today, which is conflict resolution. They didn't have the time or opportunity to see if they could engender sufficient support in the Gila and in the Blue Range area in Arizona. There have to be some assurances and incentives for all the people involved, from land users and private landowners to the urban residents. This has not been accomplished.

People believe what they perceive. The perception is that an endangered species on private property or on an allotment is going to inhibit people's ability to do traditional work, devalue their work, and cause economic loss due to predation of livestock. Those things are real in the minds of residents of these communities. If the American people want endangered species protected, maybe they need to start to pay for the cost of having endangered species.

There is a mythology that wolves are essential to the balance of the ecosystem. That was the case perhaps 200 years ago, but today they are not essential to the ecosystem. It becomes not a biological issue, but an emotional/social issue to those who believe that the predators have a supreme right to hunt.

The EIS calls for up to 100 wolves in the Gila recovery area. The service has no plans for limiting the number of wolves or packs within the Gila wilderness area. The New Mexico Game and Fish Department has pointed out that our deer herds are declining. We estimate our deer population in the 190,000 acres of the Gila to be in the vicinity of 1,000 head of deer. Our total population of elk is also about 1,000 head. When spread out in this area, if the game perceive a threat from wolves, they will leave. It would be tough for the wolf to have enough elk and deer to sustain the population of wolves and increase their numbers. Throughout the wolf recovery area, there are no plans to manage the wolves, only problem wolves. The service intends to let the wolves set their population density. This is not wildlife management today.

Kieran Suckling
Having been involved for over a decade in the effort to reintroduce the wolves into the Southwest, Mr. Suckling observes that the initial public involvement process by the U.S. Fish and Wildlife Service was rigorous. Since the Center for Biological Diversity sues the federal agencies over bad process, it recognizes when good process has occurred. There was no need for an EA, since the EIS authorized the translocation of the wolves in New Mexico. For the service to implement the EA, knowing it was contentious, was sign that the service went out of its was to communicate with the public and get people involved. The service also took the time to do this at some risk to the wolves since they were in captivity. The communication misunderstanding issue has less to do with process and more to do with purposeful misinformation.

There is huge amount of propaganda, purposeful miscommunication, and fear mongering. A big segment of the public is against the reintroduction and they are waging a campaign to convince the public that wolves are a threat. As long as that continues we can't expect the federal government to solve these issues. A recent press release by New Mexico Farm and Livestock Bureau is an example of this fear mongering. It characterizes a woman's encounter with wolves as an attack, while the woman herself said the wolves were more interested in her dog. She herself was in favor of reintroduction.

There is sound biological reason to put wolves in the Gila. The decision to put wolves on the Arizona side and not New Mexico was a purely political one to appease the ranching industry in New Mexico. Wolves have had a wonderful effect on Yellowstone. Further, it is deeply unethical for human beings to drive another species extinct because they want to have a few cows or because they are nervous about wolves. People in Alaska and Minnesota live with wolves. We have a moral responsibility to these wolves. Some people don't share this perspective since we live in an urbanized world where people don't relate to wildlife.

Tracy Drummond
From the point of view of the people living in this area, it is a matter of perceptions. Long term residents and even newer ones don't see any benefits to having wolves here. We need to address the question of fear. If an animal has caused problems in the past, people are going to be afraid.

Historically, people have made their living through natural resources. Loggers, ranchers, guides, and outfitters are dependent on the Gila National Forest. With the listing of the spotted owl, the logging industry was arrested, and many people moved into guide and outfitting business. Wolves will be preying on what the people are trying to make their living at.

People perceived that the wolves were being led to that area closest to the Gila. There used to be a thriving big horn sheep population in that area that has been decimated in recent years by predators, specifically the lion. We used to have deer herd but that has declined. The elk population is also declining. People's perceptions were: Why would wolf move to that area on their own since there's nothing there for them? People perceive that they were drawn there to try to get them into the Gila on their own.

The EA process was not understood by the general public. People assumed that the process was implemented to give them a say in whether wolves were going to be introduced. They didn't understand that he wolves were going to be in the Gila regardless of the EA. It didn't address "whether." Nine hundred people showed up at public meetings to voice their opposition to the introduction of the wolf. However, if they didn't address those issues specifically stated in the EA, their comments didn't mean anything. The public wasn't aware of that.

The Catron County Citizens Group has been trying for years to implement forest restoration projects that have been inching along because of federal delays. The process has been very slow. There must be some forest health restoration, especially in conjunction with communities. The slap in the face is that compared with the slow progress of citizens group projects, the EA was completed in a matter of weeks. People's perceptions were that it was a done deal; this is why there isn't the public support. The EA process did not educate people, it alienated them. People's perceptions were that the service didn't care what they had to say.

Process Recommendations

Groups were asked to determine if an intervention was possible. Groups came up with recommendations.

1. Jointly designed monitoring process—measures outcomes and includes everyone.
2. Focus on a locally developed management plan. Look at risks to the community and how the risks are managed. Create incentives for
   landowners so that they see a value in protecting the wolves.

3. Three paths:
   - Learn if there is any interest in intervention by doing a community wide polling.
   - Do an intervention and begin with substantial community education.
   - Start over and start clean. This has been poisoned and the players may need to be changed.
4. Research and monitoring
   Have a neutral facilitator or sponsor work with all the interested parties in creating a process. There is some common ground that could be found. There is an interest in this eco system. Do some research or monitoring in the role of the species in the health of the ecosystem. Are the right questions being asked? Look for ways of getting outside the box.
5. Educational campaign—build on work of Catron County Citizens Group
   The purpose must be clearly defined and understood by all the players. There are a lot of common interests among the stakeholders that could be built upon. There are other examples to come up with creative ideas. An educational campaign would be needed. Build on the work of the Catron County Citizens Group, since they have a grounding in the community.
6. Confidential conflict assessment
   Assume that the wolves are there. Do a confidential conflict assessment to determine if this might be first time the players could be honest about what is at stake. Look at ideal options are and how feasible they are. What are the considerations of the other players and do they have merit? Are there advantages and obstacles to consensus based process? Issue a report, build trust, and assess whether convening all stakeholders together would be fruitful. They could decide whether to proceed with a consensus process.

Panelists' Reactions

Wendy Brown: The Catron County Citizens Group offers some good infrastructure for continued work.
Tracy Drummond: If people could understand the social and environmental impacts, it would help prevent alienation.
Jerry Maracchini: An assessment would be helpful. It isn't working now.
Caren Cowan: Compensation needs to happen and not be dependent on a nonprofit.

The Evolving Use of Effective Negotiation and Collaborative Processes in Hydroelectric Licensing and Pipeline Certification

Friday, May 19, 2000—10:15-11:45 a.m.

Moderator

Rick Miles, Dispute Resolution Services, Federal Energy Regulatory Commission, Washington, DC

Panelists

Fred Ayer, Lukas & Ayer Inc.

Tom DeWitt, Office of Energy Projects, Federal Energy Regulatory Commission

Mark J. Robinson, Office of Energy Projects, Federal Energy Regulatory Commission

Cleveland Kapala, PG & E Generating

Lydia Grimm, Esq.

Panel Abstract

Over the next ten years, over 200 hydroelectric projects are up for new licenses. The panel will discuss the alternative licensing process (ALP) that is available to parties. This new process encourages collaboration among a broad spectrum of stakeholders, including FERC staff, state and federal resource agencies and affected tribes, local governments, businesses and homeowners, conservation and other recreation organizations, and the general public. A primary goal of an ALP is to develop consensus among this broad spectrum of stakeholders. Collaboration typically results in both applicants and stakeholders identifying studies they collectively believe need to be conducted before mitigation measures can be agreed upon. Experience has shown that when the application and preliminary draft NEPA document are collaboratively developed, there is usually general agreement (often in the form of a settlement) among stakeholders as to license terms and conditions, including those that would otherwise be mandatory conditions. This process is also adaptable to situations where resource agencies have mandatory conditioning authority. An ALP has less structure and may be best suited when all stakeholders share an expectation that collaboration on solutions will produce a workable result. During the course of the ALP, parties can also use alternative dispute resolution procedures to resolve discrete issues.

INDIVIDUAL PAPERS

Applying Collaboration in FERC Relicensing or "Collaboration" Is Not a Four-letter Word!

By Fred Ayer

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Applying Collaboration in FERC Relicensing or "Collaboration" Is Not a Four-letter Word!

By Fred Ayer, Lukas & Ayer, Inc.

The Clark Fork Project

- Avista Corporation, Spokane, Washington
- ERC # 2058—Cabinet Gorge, Idaho
- FERC # 2075—Noxon Rapids, Montana
- 70 miles of reservoir on the Clark Fork River
- 790 Mw
- Listed species: bull trout
- Two sets of state agencies, federal agencies, five Native American tribes, Trout Unlimited, local NGOs, and public
- Goal to achieve a pre-filing comprehensive settlement agreement with all parties

An industry in change

- The traditional view of the certainty of the initial license
- Licenses relatively immutable during the term
- Licensees not able to keep pace with social interest in rivers
- Paradigm of the "once in a lifetime opportunity"
- Magnitude and complexity of relicensing underestimated by everyone

The relicensing "clash"

- River interests seek measures uncertain of their opportunity to effect future change
- Licensees oppose measures not warranted under today's conditions
- Little incentive to resolve disputes

The chemistry for a successful negotiation—work of Lamb, Burkhardt, and Taylor

- All recognized stakeholders are involved in the process
- All parties recognize the need to negotiate
- Each party can prevent any other party from acting unilaterally
- Each participant can commit themselves and their organization to implementation
- There is a sense of urgency in the negotiation
- Technical issues are clear

Creating the negotiating environment

- Reaching all stakeholders
- Participant education
- Giving the parties confidence in the negotiation
- Identifying the decision makers and the decision-making process
- Issue-focused negotiation
- The urgency to negotiate

Internal communications and education—a top priority

- You must educate your organization

- The importance of management commitment
- Meet regularly with management

Of course we have a plan! (translation: we're making this up as we go!)
- You *will* have a plan, but it will need to be flexible
- Creativity and breakthrough thinking will serve you well
- Helping everyone understand that change will be your companion throughout the process will occupy more of your time than you would have ever imagined

Lessons Learned

We have met the enemy and it is us!
- Part-timers and "casuals"—beware of internal saboteurs
- Dealing with those who fear you will "give away the farm and *all* the livestock"
- The effect of peer pressure
- Clearly define who speaks for your organization
- Teamwork—high performance teams are made not created by decree—no matter what your organization's leadership thinks!

The licensee's allocation of power
- When you give power away it will be returned with interest!
- Giving power to the traditionally unpowerful creates an incentive for others to negotiate
- Shifts in power to a broader range of stakeholders will challenge and scare traditional decision makers
- If you give participants real power, they will tend to exercise it responsibly

Recognize the uniqueness of tribal governments
- Define what kind of relationship you want to have with tribes—whatever that is, it will supersede and overarch your relicensing
- Traditional consultation practices just aren't effective
- You must be prepared to carefully balance your advocacy of tribal interests with those of other parties

The power of consensus
- The ultimate in power redistribution
- Helps ensure all legitimate interests are recognized in a way that fosters agreement
- Diminishes positional negotiation and focuses on compromise

The adversarial science trap
- Avoid the morass of dueling experts by fostering joint-fact finding
- Group selection of scientific contractors is a powerful moderating force that lends clarity by focusing on defining the issue itself, not the method for its assessment or the validity of the findings

Good and bad reputations

- A “good” reputation won’t make your job easier, but it probably makes it easier to initiate a collaborative process
- A “good” reputation will kill you if your long-term behavior isn’t congruent
- A “bad” reputation may be a great secret weapon if you’re able to shift, because people have no positive expectations
- A “bad” reputation that can’t shift means you need to start with a fresh face

Conclusion—some pedantic axioms

- The traditional power brokers (licensees and agencies) will have by far the greatest difficulty participating in a collaborative process
- Providing financial assistance to participants does *not* translate into them giving more focus to your project, but it does make them feel better
- Conducting “fair” meetings is critical, however this may not require a “neutral” facilitator
- A collaborative’s greatest reasons for failure are:
  —That it’s not really a “collaborative” other than in name only;
  —The inability of other participants to give the collaborative due time and focus; and,
  —That there may be insurmountable disagreements and issues you didn’t properly scope before you started
- A collaborative may be a way to avoid positional bargaining up front, but it likely won’t get you to the bottom-line issues any faster
- That said, however, it probably does create a real opportunity to reach agreement when you get to those bottom-line issues
- A collaborative that doesn’t result in a comprehensive agreement, is still a success
- Some veterans of collaborative relicensing say they will “never do it again”... ostensibly because it’s too time consuming, but I wonder if it isn’t because it’s too “confining”
- Some participants look to FERC’s ALP as a “silver bullet”—save your time looking—there are no silver bullets!
- A participant’s greatest challenge will be their own organization

Project Fact Sheet: Avista Corporation’s Clark Fork Projects—Montana and Idaho

Background

In 1992 Fred Ayer, Lukas & Ayer, Inc. was retained by Avista Corporation (Avista Corp.) to assist them in the is the relicensing of the Clark Fork Projects located in western Montana and northeastern Idaho on the lower Clark Fork River. The Noxon Rapids Project, completed in 1958, is a load following, power peaking facility with a maximum generating capacity of 554 MW from its five turbines. At full pool, the Noxon Rapids dam creates a 7,940 acre reservoir, with a maximum depth of 200 feet. The reservoir is 35.5 miles long and extends upstream to near the town of Thompson Falls, Montana. Cabinet Gorge project completed in 1952 is also a load-following, power-peaking facility with

a maximum generating capacity of 236 MW from its four turbines. At full pool, the Cabinet Gorge dam creates a 3,200 acre reservoir with a depth of 121 feet. The reservoir is 20 miles long.

Clark Fork Relicensing Process

The Avista Corp. began planning for the relicensing of the Clark Fork Projects in 1992. After exploring a variety of options they decided to try to avoid the contentious nature of many relicensing proceedings by developing a more participative consultation process. Eventually participants in the process generally referred to the process as "the collaborative" or the Living License™ approach**.** This strategy of consultation and consensus building with Clark Fork River stakeholders had as its primary goal the development of protection, mitigation, and enhancement (PM&E) measures that would form a comprehensive settlement agreement among all stakeholders. The collaborative process began in mid-1996 when all stakeholders met in Noxon, Montana, and with the help of a neutral facilitator developed a process for participating in the relicensing of the Clark Fork Projects. Calling themselves the Clark Fork Relicensing Team (CFRT), the group included representatives from nearly 40 organizations, including federal and state agencies from Idaho and Montana, five Indian tribes, non-government organizations, conservation groups, property owners, and Avista Corp. The CFRT was organized into five groups:

- Fisheries Technical Work Group;
- Water Resources Technical Work Group;
- Wildlife, Wetland and Botanical Technical Work Group;
- Land Use, Recreation, and Aesthetics Technical Work Group, and;
- Cultural Resources Management Group

The Living License Approach

The Living License approach relies heavily on an adaptive management philosophy developed and implemented using the basic principles of:

- Interest-based negotiation;
- Consensus decision making;
- Creativity; and
- Common sense

We think of adaptation as action in response to learning. In recent years the term adaptive management has been used to describe an approach to making management decisions which emphasizes conscious experimentation and learning. It is in this light that the signatories to the settlement agreement use the adaptive management approach to implement cultural and natural resource PM&E measures for the Clark Fork Projects.

The adaptive management approach for the Clark Fork Projects uses PM&E measures for natural resources developed through consensus by the CFRT and considered fea-

sible and likely to have a high chance of success. The success of these initial PM&Es will be evaluated by the technical advisory and management committees using the monitoring programs established through the settlement agreement and described in FERC license articles for this Project. Based on the results of the evaluations, the PM&Es will either be fine-tuned to improve them or new PM&Es will be developed to replace them. Avista Corp. believes the mission of the Living License is to meet the challenges of effectively managing dynamic resource interests through the term of the new license.

Process Design

Working closely with the stakeholders, Avista Corp. included a number of interesting processes elements in the consultation and license implementation process including:

- Consensus decision making that we defined as "a decision that everyone could live with"
- Neutral facilitation of both management committee and technical work group meetings
- Joint fact-finding, which in this case meant that technical work groups decided which studies were necessary, designed the study scopes, and chose the contractor
- Early implementation of PM&Es (3/1/99)—this means that Avista Corp. is implementing PM&Es well in advance of issuance of a new license
- Continued long-term involvement by stakeholders in the implementation of the settlement agreement and new license
- Full time involvement of two state (Idaho and Montana) and one federal employee as integral members of the Clark Fork Implementation Team

Regulatory Highlights

The following items are highlights of the regulatory process for the Clark Fork Projects.

- In advance of issuance of the ISCD and during field seasons 1993 and 1994, Avista Corp. completed two years of natural resource inventories, which resulted in a number of study reports. The reports describe the ecosystem associated with the lower Clark Fork River and provided background information for use in developing PM&E strategies.
- On February 7, 1995, Avista Corp. filed a request to accelerate the expiration date of the license for the Noxon Rapids Project, FERC # 2075, from April 30, 2005 to February 28, 2001. The FERC issued an order on June 2, 1995, accelerating the expiration date of Noxon Rapids to February 28, 2001. In their intervention, Trout Unlimited fully supported Avista Corp.'s request stating that: "all parties...will benefit if the relicensings of these two projects are simultaneously addressed such that the cumulative impacts of the two projects may be more efficiently and more accurately determined."
- On June 8, 1995, Avista Corp. held a pre-consultation workshop to help the public and natural resource agencies become more familiar with the projects and the natural resource inventory studies. The primary purpose of the workshop was to afford state, tribal, and federal agency scientists the opportunity to meet the Avista Corp. scientists

who conducted the natural resource studies and ask them specific questions about the reports or issues of importance to their agencies.

- On September 15, 1995, Avista Corp. sent copies of its Initial Stage Consultation Document (ISCD) to a distribution list that included: federal and state resource agencies, tribes, non-government organizations, local governments, and other interested parties.
- On October 31 and November 1, 1995, Avista Corp. in cooperation with the USFWS sponsored a LIAM workshop in Sandpoint, Idaho. The LIAM workshop gets its name from a computer software program called LIAM (legal-institutional analysis model) which helps parties to a negotiation develop a shared understanding of the consultation process. The exercise uses LIAM software to hear from each party about desired outcomes and processes and to assess efficient approaches to consultation.
- Avista Corp. held Joint meetings on successive days at two locations; November 13, 1995 at the USFS Bunkhouse, Noxon, Montana, and November 14, 1995, at the University of Idaho Field Station, Clark Fork, Idaho. A transcript of the meetings was made available to all parties on request.
- On November 15, 1995, the FERC held a public meeting at the University of Idaho Field Station, Clark Fork, Idaho, to receive comments from agencies, tribes, and the public on suggested improvements for FERC NEPA scoping meetings planned for mid-1996.
- On June 18, 1996, FERC issued Scoping Document 1 for the relicensing of the Clark Fork Projects.
- On July 15 and 16, 1996, FERC held NEPA scoping sessions in Idaho and Montana. These scopings sessions were held in conjunction with the first CFRT quarterly meeting, where stakeholders, with the guidance of a neutral facilitator, designed the process and structure for the collaborative consultation on the Clark Fork Projects.
- On September 24, 1996, FERC issued Scoping Document 2 for the relicensing of the Clark Fork Projects.
- On July 23, 1997, Avista Corp. filed with FERC a request for waiver of certain relicensing regulations and proposes to prepare an Applicant Prepared Environmental Assessment.
- On January 23, 1998, FERC designated Avista Corp. as the Commission's non-federal representative for the purposes of initiating consultation with the USFWS under §7 of the Endangered Species Act on bull trout and other species.
- On December 30, 1998, Avista Corp. entered into a Programmatic Agreement with the Kootenai Tribe of Idaho, Confederated Salish and Kootenai Tribes of the Flathead Reservation, Coeur d'Alene Tribe, Kalispel Tribe, Federal Energy Regulatory Commission, Forest Service, Advisory Council on Historic Preservation, Idaho State Historic Preservation Office, and Montana State Historic Preservation Office for the Clark Fork Heritage Resource Program. This agreement became part of the settlement agreement.
- On February 17, 1999, Avista Corp. filed applications for new FERC licenses for the Clark Fork Projects. The filing included a settlement agreement, applicant prepared environmental assessment, and biological assessment.
- On March 4, 1999, FERC accepted Avista Corp.'s application for filing and solicited motions to intervene and noticed the application being ready for environmental analy-

sis and solicited comments, recommendations, terms and conditions, and prescriptions.

- In early November 1999, the FERC issued a draft EIS for the Clark Fork Project, a final EIS in February 2000, and a new 45-year license in February 2000. The license order incorporated the settlement agreement as a condition.

For more information on this project, contact Fred Ayer at rhino1947@aol.com.

Managing Scientific and Technical Information in Environmental Conflict Resolution: Principles and Practices

Friday, May 19, 2000—10:15-11:45

Moderator

Juliana Birkhoff, RESOLVE, Inc., Washington, D.C.

Panelists

Robert Barrett, Mediator, Menlo Park, CA

Martha Bean, Mediator, Seattle, WA

Emily Rudin, U.S. Institute for Environmental Conflict Resolution, Tucson, AZ

Panel Abstract

For the past eighteen months, a working group, sponsored by the U.S. Institute for Environmental Conflict Resolution in Tucson, Arizona, RESOLVE, Inc. in Washington, D.C., and the Western Justice Center Foundation in Pasadena, California, has been tackling the question of how ECR processes integrate diverse knowledge, interests, values, and politics. The working group collaborated with more than a hundred other professional mediators to capture and make explicit the various strategies and techniques that mediators use when stakeholding groups participate in collaborative processes to resolve science-intensive environmental disputes. The project identified nearly 40 important ideas and practice principles that underlie the way mediators approach problem solving, plus many creative strategies to deal with scientific and technical complexity. This session will present these ideas and provide participants with practical ideas for integrating scientific and technical information into environmental dispute resolution processes.

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Designing Collaborative Processes across Multiple Agencies: The Case of the Air Force Conversion Agency

Friday, May 19, 2000—10:15-11:45 a.m.

Moderator

Suzanne Ghais, CDR Associates, Boulder, CO

Panelist

Claire Biunno, Air Force Base Conservation Agency

Panel Abstract

When a base is closing, the Air Force has to ensure environmental cleanup. This often leads to conflicts with regulators at all levels, draining resources, and slowing the conversion to productive civilian use. The Air Force Base Conversion Agency has developed a system for resolving these disputes with the help of CDR Associates. Challenges include (1) building consensus among multiple government agencies with different priorities, (2) handling technically complex issues, and (3) making decisions in large bureaucracies when technical expertise rests at lower levels but decision-making authority rests at higher levels. By the time of the conference, the system will have been put into use for one significant dispute.

Panel Summary

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Design of a System to Resolve Environmental Disputes at Closing Bases: Pilot Project of the Air Force Base Conversion Agency

The Air Force Base Conversion Agency, together with dispute resolution consultants and state and federal regulators in California, has designed a system to resolve environmental disputes between the Air Force and regulators. The system is set up to resolve disputes at the earliest possible stages, and at the lowest appropriate levels, while still providing for the more intractable disputes to be elevated through a formal process to be resolved by higher-level officials without the need for litigation. It is expected to reduce the time and resources spent disputing, while resolving issues based on solid technical and legal information and enhancing interagency cooperation.

Background

In the late 1990s, the Air Force Base Conversion Agency (AFBCA) was frustrated by several lengthy disputes with regulators over the cleanup of closing bases, particularly in California. Disputes over issues such as appropriate cleanup levels and institutional controls were persisting for years. When AFBCA Environmental Counsel Claire Biunno took an alternative dispute resolution (ADR) course focusing on designing systems to resolve multiple or recurring disputes, she concluded that this was needed to get these disputes settled so that cleanup and transfer could proceed. With Ms. Biunno and her client John Smith, the Chief of the Environmental Division, in the lead, AFBCA contracted with CDR Associates, a dispute resolution consulting firm in Boulder, Colorado, to undertake the design process. The goal was to design a dispute resolution *system* (interlocking set of processes) that might ultimately be used at closing bases nationwide, but as a pilot area AFBCA chose Northern California, where some of the most contentious disputes were occurring.

Since all closing Air Force bases in California are National Priority List sites (under CERCLA), cleanup is governed by Federal Facility Agreements (FFAs) between the Air Force and state and federal regulators. The FFAs contain a formal dispute resolution process that helps prevent the need for litigation. However, this process had been used few times, and it was generally seen as dysfunctional. The FFA also directs the parties to use informal methods of dispute resolution first, but does not say what this means or how to do it. The dispute resolution system design effort had to work within the framework established by this FFA dispute resolution procedure.

As a first step, CDR conducted an in-depth fact-finding process focusing on Castle and Mather bases. This culminated in an assessment report with broad recommendations for system design. Next, a group of representatives of the various agencies was formed to design the system by consensus. Represented on the design group were AFBCA, US EPA, the California Department of Toxic Substances Control (part of CalEPA), and the Central Valley Regional Water Quality Control Board.

The Resulting Dispute Resolution System

The resulting dispute resolution system has two broad components: (a) It provides greater structure and guidance for an informal dispute resolution process, maximizing the chances of ending disputes at lower levels, and (b) it fleshed out the formal dispute resolution procedure in the FFA and made it more useable and useful, so that disputes can be elevated and satisfactory solutions found in cases where lower levels cannot resolve them without overstepping their authority.

The system consists of a series of levels—from the remedial project managers up to the EPA administrator. Because each agency has some power to challenge decisions it does not favor, there is a need for consensus among all agencies in order to resolve a dispute at a given level, except at the highest level where the EPA has the authority to make a binding decision. Therefore, each level works toward resolution by consensus and elevates only those issues on which it cannot agree. Several key elements of the system maximize the chances for successful and satisfactory resolution:

1. Preparation of a *joint* statement of the issue by the participating agencies before elevating the issue. This statement clearly defines the issues that need to be resolved and identifies areas of agreement and disagreement. Some issues may get resolved in the course of the collaborative effort to define the issue.
2. Preparation of position papers that provide technical and legal detail supporting each agency's views on the issue(s) at hand. The development of position papers ensures that each agency speaks with a unified voice.
3. Joint briefing of the decision makers at each level by *all* the participating agencies. This briefing enables decision makers to have a complete perspective on the issue(s) and may avoid the polarizing effect of separate briefings. The remedial project managers and others most knowledgeable about the issues will assist in briefings to provide situation-specific information to decision makers.
4. Establishment by each level of a time frame for decision making (taking into account the preceding level's recommendation) and a way to address the challenge of geographical distance.
5. Other tools to aid in consensus building, such as advice of technical experts, use of pilot studies, and use of facilitators.
6. Documentation of agreements reached at each level, to allow for a narrowing of the issues and institutional memory of decisions made, including the rationale for those decisions.

After the system was designed, CDR consultants conducted workshops both at the Pentagon and at different locations in California to explain the new system and help build basic skills in collaborative negotiation in order to enable most effective use of the system. The system is currently being used to resolve issues of land use controls at Norton and throughout the state, as well as disputes over cleanup levels at McClellan. While implementation has only just begun, the system seems so far to be providing hope that previously intractable issues may be successfully resolved.

When Two Heads Are Better Than One: Co-mediation

Friday, May 19, 2000—10:15-11:45 a.m.

Moderator

Elizabeth Watson, Department of Sociology, Humboldt State University

Panelist

John A. Gromala, Gromala Mediation

Panel Abstract

This workshop will be on the use of co-mediators in multiparty disputes. The community-based mediation model has used multiple mediators for decades, mostly with success. As volunteers from the community staff these organizations, a mediator panel composed of experienced and beginner volunteers makes sense. What we are interested in here is the use of two or more professional mediators in multiparty cases. We argue that the use of multiple mediators makes particular sense in the case of collaborative processes that deal with environmental and other public policy conflicts. The session will be interactive and provide participants with an increased understanding of multiparty conflict resolution. The presenters have worked as a team with environmental, workplace, and public policy disputes.

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Community-based Assessment of Social and Economic Impacts of Salmon Recovery

Friday, May 19, 2000—10:15-11:45 a.m.

Moderator

Charles Harris, University of Idaho, Moscow, ID

Panelist

Connie Lewis, Meridian Institute, Dillon, CO

Panel Abstract

This panel focuses on different aspects of increasingly controversial efforts to recover runs of wild salmon in the state of Washington. Connie Lewis will describe the Puget Sound process and compare it to similar efforts in Oregon, engaging workshop participants in a discussion of the complexities of salmon recovery planning and the role of third parties in those processes. Dr. Chuck Harris will present another approach that focuses on the research of a team of scientists from the University of Idaho assessing the social and economic impacts on communities of alternative actions under consideration by the U.S. Army Corps of Engineers for restoring wild runs of salmon in eastern Washington. The panel will discuss the pros and cons as well as the lessons learned from these collaborative approaches in assessing impacts and resolving conflicts resulting from salmon recovery efforts.

Individual Papers

Community-based Assessments for Sustainable Resource Management in the Pacific Northwest
By Charles C. Harris

Building Collaborative Approaches to Salmon Recovery
By Connie Lewis

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Community-Based Assessments for Sustainable Resource Management in the Pacific Northwest

By Charles C. Harris and William J. McLaughlin, Professors
Dennis R. Becker and Erik A. Nielsen, Research Associates
College of Natural Resources, University of Idaho, Moscow

Abstract

Scientists assessing the social and economic effects of large-scale management actions, such as those proposed for salmon recovery on the Lower Snake River in the Pacific Northwest of the U.S., are challenged by the need to obtain information on impacts at the community level as well as across large landscape-level regions that transcend political jurisdictional boundaries. This paper presents a process developed for fulfilling socioeconomic criteria and indicators (C&I) with community-based resource assessments in the Pacific Northwest. It begins with a discussion of sustainable forest management and the role of criteria and indicators in monitoring and evaluating success in achieving sustainable forestry, as well as other ecological and social conditions. It then focuses on socioeconomic criteria and indicators and presents research that represents one approach for implementing a process for operationalizing and assessing these C&I. In so doing, it suggests an in-depth public involvement strategy for current controversial federal resource-management efforts in the U.S., including planning for sustainable ecosystem management in the Pacific Northwest and evaluating alternative actions for recovering runs of wild salmon on the Lower Snake River in southeastern Washington state. Alternative federal actions under study ranged from maintaining the existing water, hydroelectric, irrigation, and recreation systems to breaching four dams. To assess the impacts on communities of these alternative actions, interactive community forums were held in 27 communities across a three-state region of the Pacific Northwest. As part of the Corps' environmental impact study and feasibility analysis, residents from a diversity of communities were asked to assess the kinds and magnitudes of impacts on their communities across four broad dimensions of community characteristics and conditions. An important goal of these interactive forums, which typically lasted over four hours, was to empower community residents with an understanding of the results of the other biological, economic, and physical impact studies on which to base their judgments. Based on this impact information and a structured process for group interaction, residents shared and discussed their perspectives in groups with a diversity of fellow community members. They could then make more informed judgments about effects on the community of the alternatives under consideration. Strengths and weakness of this community-based C&I approach to social impact assessment are compared to traditional methods, such as key informant interviews, secondary data analysis, polling, and survey research. Criteria evaluated include cost, time expenditure, stimulation of public dialogue and judgment, and education of the public. The paper concludes by addressing the implications of this analysis for developing useful social and economic criteria and indicators, and for applying them to better inform policy makers confronted with highly controversial efforts like restoring endangered species in large landscape-level regions.

Keywords
Sustainable forest management, criteria and indicators, social impact assessment, Lower Snake River salmon, Interior Columbia Basin Ecosystem Management Project.

1. Introduction

Proponents of landscape-level, ecosystem-based programs to recover endangered species need to identify and understand the perceived social impacts of these initiatives. Scientists assessing the social and economic effects of large-scale management actions, such as those proposed for salmon recovery on the Lower Snake River in the Pacific Northwest, are challenged by the need to obtain information on impacts at the community level as well as across large landscape-level regions that transcend political jurisdictional boundaries. Traditional data for social and economic criteria and indicators (C&I) often are of limited breadth and depth for understanding impacts on rural communities.

This paper presents a process developed for fulfilling socioeconomic criteria and indicators (C&I) with community-based resource assessments in the Pacific Northwest. These community-based assessments were conducted as part of larger planning and feasibility study projects being conducted by public resource-management agencies in the Pacific Northwest. The paper begins with a discussion of sustainable forest management and the role of criteria and indicators in monitoring and evaluating success in achieving sustainable forestry, as well as ecological and social conditions. It then focuses on socioeconomic C&I and presents research that represents one approach for implementing a process for operationalizing and assessing these C&I. In so doing, it suggests a public involvement strategy for current controversial federal resource management efforts in the U.S., such as planning for sustainable ecosystem management and evaluating alternative actions for recovering runs of wild salmon on the Lower Snake River in southeastern Washington state. Strengths and weakness of this community-based C&I approach to social impact assessment are compared to traditional methods, such as key informant interviews, secondary data analysis, polling, and survey research. Criteria evaluated include cost, time expenditure, stimulation of public dialogue and judgment, and education of the public. The paper concludes by addressing the implications of this analysis for developing useful social and economic criteria and indicators, and for applying them to better inform policy makers confronted with highly controversial efforts like restoring endangered species in large landscape-level regions.

2. Development of Criteria and Indicators for Sustainable Forest Management

Perhaps the central question raised by current forest management is: “How do we define, assess and achieve sustainable forest management?” The concept of sustainable forest management has been evolving over the last century, with concerns about managing public forests and wildland areas increasingly focused in recent decades on ensuring that a diversity of forest values are being recognized and adequate actions taken to monitor and maintain them. With increased understanding and changing com-

munity attitudes, management practices are being developed to conceptualize a broadened understanding of sustainability and then to operationalize and implement strategies for sustainable forest and resource sustainability.

Pursuant to the 1992 United Nations Conference on Environment and Development, a formal international agreement was articulated and enacted that formulated guidelines, or "criteria," for assessing progress on sustainable forest management. One group that has actively worked to operationalize the substance of this agreement has been the Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests, now known as the "Montreal Process" Working Group. The Montreal Process Working Group includes 12 countries encompassing over 90 percent of the world's temperate and boreal forests, including Argentina, Australia, Canada, Chile, China, Japan, the Republic of Korea, Mexico, New Zealand, the Russian Federation, the United States, and Uruguay.

These countries endorsed an additional statement of political commitment, entitled the "Santiago Declaration," that includes a comprehensive framework of seven criteria and 67 indicators for use at the national level for the conservation and sustainable management of temperate and boreal forests. The current C&I process is being developed by the Montreal Process member governments as a means of assessing current conditions and progress towards achieving sustainable forest management in the future, with the goal of promoting ongoing efforts to achieve sustainable forest management. Criteria are the broad forest values that managers seek to maintain, while indicators provide measures of how well those values are being protected. Together, criteria and indicators are a useful tool for assessing progress towards the achievement of sustainable forest management. The criteria agreed by the Montreal Process countries involve the maintenance of:

- Biological diversity
- Productive capacity
- Ecosystem health and vitality
- Soil and water resources
- Global carbon cycles
- Socioeconomic benefits; and
- An effective legal and institutional framework.

The set of C&I established in the Montreal Process has been elaborated in national-level frameworks for gathering, analyzing, and evaluating information on ecological conditions of forests and their relation to economic and societal well-being. In Australia, for example, the seven criteria address key forest values that the broader community seeks to maintain; however, it has been recognized that the Montreal Process indicators will need to be reviewed in terms of their applicability at the regional level. The Montreal Process Implementation Group for Australia (MIG) was tasked with developing a framework of regional indicators based on the Montreal Process criteria and indicators. This task is being undertaken in consultation with stakeholders. The MIG will use the experience gained from the compilation of data for Australia's first report against the Montreal Process criteria and indicators to develop indicators that are relevant at the regional level.

3. Applications of Criteria and Indicators in the Inland Northwest of the U.S.

The present paper now turns its attention to resource management issues in the Inland Northwest and the application of C&I to the study, monitoring and evaluation of those resources. The paper describes case studies that provide an approach for operationalizing and assessing C&I under circumstances of controversial management issues.

3.1. The Region, Its Resources, and Management Issues

The area under study in these case studies encompasses the Interior Columbia and Snake River basins, a region of the northwestern U.S. that spans several sub-basins and their component watersheds across southeastern Washington, eastern Oregon, and central and southern Idaho. It encompasses a varied landscape that extends from the western reaches of the Columbia Plateau in central Washington and Oregon, eastward to the Bitterroot Mountain range in north central Idaho, and south through the central Idaho mountains to the middle and upper stretches of the Snake River in southern Idaho. It includes the Palouse in north central Idaho and eastern Washington, across the Clearwater, Snake and Salmon River valleys, and the Camas Prairie in central Idaho. The basin's natural resources include some of the richest farmland in the world on the Palouse and Camas Prairie; prime timber lands in the Clearwater and Bitterroot Mountains; rivers harnessed by dams for power generation and reservoir recreation, such as the Snake and Clearwater Rivers and their tributaries; and range lands that traditionally have supported cattle and sheep grazing. Its watersheds also include: old-growth forests in the Clearwater, Nez Perce, Umatilla, Boise, Sawtooth, Salmon and Targhee National Forests; natural flowing rivers and pristine streams inhabited by trout and salmon (e.g., the Selway and Lochsa Rivers and renowned trout streams like Kelly Creek); wilderness (e.g., the Selway-Bitteroot, Gospel Hump, Frank Church River-of-No-Return, etc.); and a diversity of wildlife found in few other places, including deer, elk, moose, bear, and cougar.

This region also includes human communities as varied and unique as the landscape in which they are located—from cities with diverse economies like Lewiston and Boise in central Idaho and the Tri-Cities in central Washington, to Twin Falls, Pocatello, and Idaho Falls in southern Idaho; from dry land farming towns like Pomeroy, Washington, and Genessee, Idaho, to irrigated agricultural towns like Burbank, Washington, and Ashton and Filer, Idaho; from ranching towns like Enterprise in Oregon to Homedale in southern Idaho; and from timber towns with a strong pioneering heritage like Pierce, Idaho, to ones suffering the growing pains of a "New West" economy of tourism and retirement immigration, like Riggins and Kamiah in north central Idaho.

In recent years, a variety of issues concerning the basin's natural environment, its management, and their relation to the region's communities and socioeconomic development have been approaching a critical point. These issues have important implications for the region's future, its quality of life, social well-being, and environmental quality, and they currently are the potential source of major conflicts and significant controversy in the basin. Issues of current concern include:

- Agricultural practices and the economic impacts of their regulation for air and water quality;
- Forest ecosystem management issues, including forest health, the proposed reservation of roadless areas on several national forests in the basin by the USDA
- Forest Service and its effects on the region's timber supply, and efforts to mitigate the impacts of deteriorating logging roads on water quality and fauna in those forests;
- The Forest Service's initiation of a process for revising the forest plans for national forests in the region;
- Regulatory and management actions related to the Endangered Species Act and other environmental laws—the most controversial of which is the restoration of salmon runs on the Lower Snake River, resulting in consideration of the feasibility of breaching of four dams on the Lower Snake River by the U.S. •Army Corps of Engineers, as well as other actions such as increased flow augmentation; and
- The impacts of all of these actions—and especially reduced and changing resource supplies and uses of public lands—on the region's economies, residents, and their communities' way-of-life and their customs and culture, and ultimately on their quality-of-life and social well-being.

Issues like these are perceived by citizens of the region to be of vital importance for their future and that of the landscapes in which they live and work. The sustainability of the basin's economy and the well being of its communities are of particular concern, as well as other associated impacts of resource use and management on environmental protection and community development.

3.2. Criteria and Indicators of Particular Concern for the Region

Of the seven criteria and 67 indicators developed for use at the national and regional level for the conservation and sustainable management of a region's resources, several are particularly pertinent for this discussion. They include:

Criterion 1: Conservation of biological diversity

Indicators include ecosystem diversity in the Interior Columbia Basin, such as:

- The extent of fragmentation of forest types in forest management units in the basin;
- The region's species diversity, such as the number of forest dependent species that are of special concern to the region's publics and resource managers (e.g., the bald eagle or woodland caribou); and
- Species that are rare, endangered or threatened (e.g., stocks of wild Chinook salmon and the northern spotted owl).

Criterion 3: Maintenance of productive capacity of forest ecosystems

Indicators include:

- The area of forest land and net area available for timber production—for example, reductions in timber harvest levels could result from endangered species recovery; and
- The annual removal of wood products compared to the volume determined to be sustainable, which could be significantly reduced over the long term due to proposed roadless area reservation.

This paper focuses on socioeconomic criteria and indicators (SECI) for sustainable forest management. The above C&I have important ramifications for the economic and social well-being of resource-based communities. These SECI are represented in the current list of C&I, in particular, by:

Criterion 6: Maintenance and enhancement of long-term multiple socioeconomic benefits to meet the needs of societies

Indicators for this criterion include ones related to a diversity of needs and benefits, including:

- Value and volume of wood and wood products production in the Snake River basin, as reflected in size of industry and amount of employment relative to a community's overall workforce; these indicators are related to:
  - —Employment and community needs, including the viability and adaptability to changing economic conditions of forest dependent communities.
  - —Recreation and tourism, such as the area and percent of forest land managed for habitat protection of salmon spawning areas for production of salmon for sport-fishing based recreation and tourism;
  - —Cultural, social and spiritual needs and values, such as the area and percent of forest land managed to protect the range of cultural, social, and spiritual needs and values in the basin, such as those represented by tribal values for salmon.

Criterion 7: Legal, institutional and economic framework for forest conservation and sustainable management

Indicators for this criterion focus on the extent to which existing frameworks, both legal and institutional, support the conservation and sustainable management of forests—in particular, the extent to which they provide for:

- Periodic forest-related planning, assessment, and policy review;
- Opportunities for public participation in public policy and decision making related to forests, and public access to information; and
- The management of forests to conserve special environmental, cultural, social and scientific values.

4. Processes for Implementing Socioeconomic Criteria and Indicators

Primary data collection and analysis were combined with analysis of secondary data and processes of public involvement in two projects whose goals were to increase public participation in the assessment process. These projects provide a blueprint for designing and implementing effective processes to help accomplish the above C&I.

4.1. An Assessment of Small Rural Communities in the Interior and Upper Columbia River Basins for the Interior Columbia Basin Ecosystem Management Project's Integrated Science Assessment

The Interior Columbia Basin Ecosystem Management Project (ICBEMP), a multi-agency resource-management planning effort conducted by the USDA Forest Service and USDI Bureau of Land Management, began in 1993. The ICBEMP region includes the lower Columbia River basin in eastern Washington and Oregon and the upper Columbia River

basin (predominantly, watersheds of the Snake River), which span all of Idaho and western Montana and Wyoming. This project sought to provide a comprehensive and thorough assessment of socioeconomic conditions at the community level of scale, as well as an assessment of the natural resources in the region. ICBEMP has produced a broad management strategy for the region's public lands, as prescribed in the project's environmental impact statement.

The project's Social Science Assessment Team recognized the need to look beyond the characteristics and conditions of ecosystems and natural resources, and to consider the situations of people and communities that are a part of those ecosystems and using those resources. Accordingly, as part of the Integrated Science Assessment, research was conducted in 1995 to better understand the characteristics and conditions of small, rural communities in the region. Data were organized and analyzed for this component of the regional assessment that included in-depth social, economic and spatial data for the communities in the Interior Columbia Basin.

The extensive, detailed data-sets developed for the ICBEMP community assessment included a database of economic data on community employment for all communities in the region. Economic profiles were developed for each of the 472 cities and towns in the region using 1995 U.S. Census Bureau sources. These data provided a profile of each community's economy in terms of their total employment and income attributed to major industrial sectors within each economy. The profiles represent an updating and disaggregation of 1992 employment and earnings data from the U.S. Bureau of Economic Analysis' Regional Economic Information System (REIS) (U.S. Department of Commerce, 1994) and the U.S. Forest Service's IMPLAN data (REIS data updated and estimated at the county level for all counties in the study area), which were then resolved and allocated to all 472 communities in the study area: the 387 small rural communities, and in addition, the other 85 cities (greater than 10,000 in population) and bordering census-designated places in the region (see Harris *et al.* 2000, for details). This disaggregation was completed using local sources such as phone listings for businesses (compiled by Business America on CD-ROM for the third-quarter of 1994) and recent directories of businesses for the relevant states. The major industrial sectors in the economic assessment, include the following 22 sectors: agriculture, agricultural services, wood and paper products manufacturing, food processing, miscellaneous manufacturing, sand and gravel mining, other mining, construction, public utilities, finance/insurance/real estate, communication, business and personal services, transportation, wholesale trade, retail trade, eating and drinking, lodging, amusement and recreation, medical and social services, the federal government, and state and local government. Together, these major sectors represent an aggregation of all industrial activities included under the subcategories for each Standard Industrial Category (SIC) (e.g., the major category wood and paper products manufacturing includes lumber milling, paper milling, and logging activities).

In addition, a self-assessment of small rural communities was conducted to ensure that informed, knowledgeable residents of the region's communities were provided an opportunity to assess the current situation in their communities. Research was conducted

by Harris *et al.* (2000) to facilitate a self-assessment by community members of the perceived social and economic characteristics and conditions for 198 small towns randomly sampled from the 387 rural communities in the Interior Columbia River Basin.

A community self-assessment workshop process was developed to assess perceived current conditions of each of the sampled communities. Key informants were identified to participate in the self-assessment workshops, using a modified snowball technique that generated a list of citizens for each community who were both active and knowledgeable about the social and economic conditions in the particular community they lived. From this list, a purposive sample of eight informants was drawn from each community to represent a variety of backgrounds and viewpoints, and thereby approximate the range of community perceptions on the changing status of the community and its orientation towards the future. Where possible, the following eight types of community leaders were included in the focus group workshop:

- An elected official (a mayor or city council member);
- A civic group leader active in a prominent service organization or club;
- An active business leader (e.g., president of the local chamber of commerce);
- A schools or health leader (a citizen active in promoting education or health services, a principal/teacher, a health care provider);
- An historic preservation or environmental group leader (someone active in local affairs);
- A newcomer (arrived in the last one to three years) to the community who is already highly involved in the community;
- A person who is perceived as an active conservative in the town (political party affiliation is not important);
- A person who is perceived as an active liberal in the town.

Each participant was asked to fill out a “community self-assessment workbook” prior to the workshop, which asked questions relating to the following twelve “critical dimensions”:

- Attractiveness of the community
- Attractiveness of the region surrounding the community
- Community attachment (personal attachment to the community)
- Community cohesiveness (“sense of community”)
- Adequacy of community services
- Community autonomy
- Economic diversity
- Resource dependence
- The community’s ability to attract business
- The community’s quality of life
- The strength of the community’s civic leadership
- The effectiveness of the community’s government
- The community’s preparedness for the future (regardless of whether residents wanted their community to change or remain as it was).

Community workshops were designed to build upon the completed workbooks and help community members describe the characteristics of their communities and the mem-

bers' aspirations for those communities. Although each of the key informants was asked to participate in terms of a particular identified role, they answered questions and participated as individuals (i.e., they provided their own perceptions of current community characteristics and conditions). Most workbook questions did not involve an expression of personal value, preference, attitude, or opinion; they simply focused on the ways respondents perceived their town's infrastructure, people, economy, leadership, and orientation toward the future.

The resulting data from the community self-assessment included workbooks completed by 1,350 key informants that provided details on residents' perceptions of the economies, social attributes, quality of life, and other characteristics of their communities. They also included the results of the 198 community self-assessment workshops, which provided collective judgments of their communities' conditions and characteristics. Detailed data from these workshops on, say, community autonomy and major factors contributing to its level in various communities provided an in-depth, comprehensive base of knowledge. Details about the results of this community self-assessment can be found in forthcoming publications (Harris *et al.* 2000, Russell and Harris 2000).

4.2. The Lower Snake River Community-based Impact Assessment

A second process was developed for the U.S. Corps of Engineers as part of its feasibility study and environmental impact assessment evaluating the socioeconomic, biological, and engineering feasibility of three alternatives for improving salmon migration through the four lower Snake River dams. That community self-assessment process, which also elicited community members' perceptions of the socioeconomic impacts of the alternatives under study, refined and elaborated on the public-involvement research and assessment process developed for the self-assessment conducted for small, rural communities in the Interior Columbia River Basin.

4.2.1. Restoration of Wild Salmon Stocks in the lower Snake River: An Overview

Anadromous fish runs throughout the Pacific Northwest are in decline, with a 1995 National Research Council estimating that 75 percent of the region's salmon stocks at risk of extinction. Currently, three stocks of Snake River salmon were listed as endangered in the early 1990s under the Endangered Species Act, and another anadromous stock, steelhead, was listed as threatened in 1997. The National Marine Fisheries Service (NFMS) produced a Biological Opinion in 1995, initiating various activities of the Salmon Recovery Plan in the Snake River; it included the mandate that the Corps of Engineers study ways to improve juvenile salmon migration through the dams on the lower Snake River and prepare an environmental impact statement on the alternative actions under consideration, as required by the National Environmental Protection Act. One alternative continues the existing system of using barges to capture juvenile salmon and transport to the Columbia River, augmenting flows of water through the Snake River to help flush the fingerlings downstream and enhancing fish guidance systems. A second alternative includes major system improvements (e.g., construction of surface bypass collection systems, turbine modifications, and fish guidance systems), and the third is the removal of the earthen portions of the dams, returning the river to its original free-flowing state.

For the feasibility study and the EIA process, a socioeconomic study was conducted to identify and forecast the associated costs, benefits, and social impacts of these alternatives. The study includes multiple levels of geographic scope. On a national level, the Corps has evaluated the economic benefits and costs to the country. On a regional level of the three states of the Pacific Northwest (Washington, Oregon, and Idaho), the Corps evaluated the economic impacts in terms of jobs and income from the different alternatives, with the economic impacts also estimated for three sub-regions (combinations of counties classified as upriver, reservoir, and down river) and for specific communities within these sub-regions. The social analysis has examined those residents and communities that may be directly or indirectly affected by the alternatives under consideration.

4.2.2. Purposes and Objectives of the Lower Snake River Community-based Impact Assessment

As part of the social analysis, the Lower Snake River Community-Based Impact Assessment introduced here had two main purposes. First, the study assessed the current condition and characteristics of selected communities in the regions of southeastern Washington, northeastern Oregon, and central and southern Idaho that might be directly or indirectly affected by the three main alternatives currently under consideration by the U.S. Army Corps of Engineers for salmon recovery in the Lower Snake River. The second purpose of the study was to assess community participants' perceptions of the kinds and extent of impacts each of the above alternatives would have on their communities. The results from the forums provide an additional tier of more detailed information reported in the social assessment analysis and considered as part of the environmental impact statement and feasibility report (see Harris *et al.* 1999a, b).

In particular, the objectives of the interactive community forums were to:

- Introduce community members to preliminary information from the Corps of Engineers' environmental impact statement and feasibility report to help them identify positive and negative social impacts;
- Understand communities' current situations and how they have changed since 1960;
- Provide residents with the opportunity to assess how their community would be affected by the three major alternatives under consideration (A1, A2, and A3);
- Obtain community residents' ideas about effective strategies for maximizing positive social impacts or minimizing negative social impacts of the proposed alternatives; and
- Provide people with an opportunity to have their input included by the U.S. Army Corps of Engineers as part of the environmental impact statement and feasibility report.

4.2.3. Research Approach and Sampling Design

The research approach taken for the Lower Snake Community-based Social Impact Assessment was a multiple case study. The unit of analysis and the sampling unit was the community, and the sampling frame was all communities located in one of the three impact areas designated by the U.S. Army Corps of Engineers for consideration in the assessment: the reservoir region in southeastern Washington, the upriver region in north central and southern Idaho, and the down river region in northeastern Oregon and

south central Washington. The goal of the multiple case study was to provide a forum for a community-based assessment of impacts of the project alternatives on a sample of 27 communities in the region comprised of these three impact areas. Each assessment was conducted during a one-day 4-hour public meeting in each of the communities. The forums enabled the UI team of social scientists to record local perspectives of past and current community responses to economic and social changes and to assess potential social impacts resulting from the project on a variety of kinds of communities.

The communities of concern for this assessment included 200-plus communities within the geographic scope of the region. Given this large number of communities, it was not possible to adequately obtain sufficient information about each community within the time frame of the decision-making process. Therefore, a range of localities in which to conduct community-based assessments was selected. The range of potentially affected communities was identified with a theoretical sampling approach, whereby communities were selected based on a typology of predetermined criteria. Two variables, economic diversity and state, were used as the primary criteria for the initial theoretical sampling frame. Economic dependence on kinds of industries also was considered in the sampling process.

All of the community forums were open to the general public, but in addition, active and involved community members were targeted and asked to attend to ensure that a range of potential interests and important perspectives were represented at each forum. The assumption was that these individuals represented the full diversity of knowledge and perspectives within each community, and that they were among the community residents who were most knowledgeable and capable of addressing key issues that could impact the future of their community.

Nonresidents of the sample communities were invited to attend the forums, but their participation was limited to providing general written comments about the assessment process and any input on the alternatives they wished to make. This input was provided on comment cards that were transmitted directly to the U.S. Army Corps of Engineers. The premise was that participants in the interactive groups at each community forum needed to be community members who possessed in-depth knowledge about their community.

4.2.4. The Community Forum Assessment Process

All of the individuals who attended the community forums participated according to a set of interactive, structured group activities. These activities were designed to promote discussion across varying community viewpoints, introduce the best available information about primary and secondary impacts of the project, and record the thoughts and reactions of the participants.

Forum participants were first asked to give their recollections about the histories of their community as a basis for beginning to think about key dimensions of their communities' changing characteristics and conditions. These dimensions were presented in terms of four broad categories of community characteristics: 1) a community's social make-up (or

a community's "people"); 2) community economy (a community's "jobs and wealth"; 3) community character (the "place"); and 4) community organization and leadership capacity (a community's "vision and vitality"). These four broad dimensions of community characteristics and conditions represented the elements of community used throughout the duration of the interactive forums. The significant historic changes in each community, as related to each of the four dimensions, were recorded and shared with the entire assembly of forum participants as illustrations of each dimension.

Forum participants were systematically assigned to different facilitated tables, based on self-reported community involvement roles (e.g., business, elected officials, land production, education and health services, etc.). The purpose here was to maximize the diversity of community members in the group at each table. These participants were first asked to assess the 1999 current situation in their community in terms of the four dimensions of community. A sheet listing a fairly comprehensive set of characteristics or conditions as related to each of the four community dimensions was reviewed to assist forum participants in (1) thinking about the specifics of each dimension, and (2) providing specific reasons or justifications for their ratings of their community based on particular characteristics or conditions of it. The facilitator at each table conducted an initial rating of each dimension with a rating form entitled, Your Community in 1999, with a current community situation scale ranging from 1 ("as bad as it could be") to 10 ("as good as it could be"). The purpose of this rating exercise was to stimulate forum participants to begin thinking about their community's situation in 1999 in terms of each of the four dimensions. With this starting point they would be better able to judge how things would change in the future (specifically, in the year 2020) if the Corps adopted any of the three proposed alternatives. This rating process also was intended to help the study team learn from forum participants about their community. Each form also obtained written responses from participants on the key or most salient characteristic or conditions for why they rated their community the way they did.

After about seven minutes of discussion of their numerical ratings of their community on a given dimension and the reasons for their ratings, participants were asked to re-rate their scale based upon what they had learned in their discussion. They were assured they could keep the same rating or change it. They then were reminded they needed to complete the second part of the question by filling in the blanks on the sheet with characteristics of the dimension from the corresponding sheet, or writing some other reason that was behind their rating. They were reminded that their justifications were equally important as the numeric rating they had given. The goal was to get them to justify their rating and explain the "why" behind it, based on the characteristics they considered most important in making their decision. This process was followed to assess the current situation in 1999 for all four dimensions.

Information was then presented to community members on the forecasted biological, economic, and physical changes associated with each of the three alternatives under consideration by the Corps (alternatives A1, A2 and A3). After presentation of the impact information, community members were asked to combine it with their knowledge of their community, "do some crystal-balling," and forecast the likely effects their community

would experience, using a community impact rating scale and again providing specific reasons or justifications for those ratings in writing.

The impact rating scale was used by participants to rate the kind and degree of change in each of the four community dimensions that would result if a given pathway was implemented, based on the presentation of information about each pathway by the study team and discussed within the groups at the facilitated tables. This community impact scale ranged from -5 ("adversely affected" by the pathway) to +5 ("beneficially affected"), with a midpoint, or "0," that was based on their rating for each dimension on the current community situation scale. Forum participants perceiving characteristics of a given dimension as being adversely affected were instructed to rate that dimension with a negative number on the impact rating scale; the higher that number, the more severe the impact was indicated to be. Those participants perceiving a dimension of their community to be beneficially affected were instructed to rate that dimension with a positive number on the scale. The last task for the consideration of each pathway was to ask participants in each group to brainstorm ways to minimize negative social and economic effects on the community, should a given pathway be selected and implemented.

4.2.5. Data Entry, Coding, Cleaning, Analysis, and Reporting

The input from forum participants who participated in each community forum included both rating scores and written justifications for their ratings. The two types of data and their analysis in this report represent a direct matching of both the quantitative data (numerical scale ratings) and qualitative data (up to three characteristics for each community dimension or reason for the rating provided by participants as justifications for their rating). These responses were entered into a database for each community. Once the data were entered, they were inspected for errors, and any found were corrected.

Standard procedures were followed for coding and analyzing the assessment's qualitative data (Miles and Huberman 1994). These data consisted of open-ended responses to questions requesting that participants give reasons or community characteristics to justify their numerical rating of each dimension of community, whether for the current (1999) situation or for the changes or impacts they perceived would result from each of the three alternatives. The number of these responses was reduced, as follows. First, categories of broad kinds or themes of these justifications were developed, and a unique code number was assigned to each category. Individual participant's responses were then coded descriptively and thematically, with each response categorized in terms of these thematic categories and the appropriate code numbers assigned to each. Lastly, patterns among these thematic categories were identified, and analytical generalizations from these patterns were made. The scale ratings, as well as themes and actual text of the reasons given, were analyzed for each community to identify patterns across the groups of participants at facilitated tables at each community forum, as well as across communities in a cross-case analysis that compared results for all the communities assessed.

Scale ratings and figures depicting those ratings were reported for each of the four

dimensions for the current situation in 1999 and each of the three alternatives. In each case, the report's "Results" section first presented figures displaying the central tendency of the ratings recorded for different groups at different tables in terms of group medians, along with a discussion of each figure. In addition, qualitative data were presented in the report in tables of coded justifications listed with three headings: "across all groups," "invited group," and "other groups." The logic underlying the pattern analysis of the qualitative data was that replication of justifications given for participants' ratings across facilitated groups at each forum was critical. This concern for replication of justifications was based on the premise that the more a characteristic or reason for a scale rating was repeated across various groups of participants at the same forum, the more salient, meaningful, and relevant that justification was as qualitative data supporting the overall central tendency reported for the community. When a justification or reason was reported out of all the groups of participants in a forum, it was included in the list under the heading "across All Groups." These clustered justifications also provided the basis for the cross-community comparisons.

The diversity of the group of participants at the invited facilitated (the "invited group") table and the output of their discussion were deemed to be very important in capturing the range of justifications. Therefore, justifications that were only listed by the invited group also were included in the analysis under a separate heading of the "invited group." A key assumption of underlying this approach to the analysis was that, along with the information presented at each forum, individual participants were also informed by their own knowledge, perceptions, and beliefs about their community's present and future. In addition, they likely were also influenced by the rich discussion among the wide variety of participants at their facilitated table.

Justifications that were listed by other groups at other tables at a forum also presented an important viewpoint. The people in those other groups, while they were determined to often be less likely to be highly involved activists, and more likely to represent particular "communities of interest" (such as farming, business, or travel and tourism), also could have unique perspectives and knowledge not possessed by the more diverse group at the invited table. Accordingly, if participants at a super-majority of the groups at the other non-invited tables mentioned a justification, it was also included as a salient reason in the analysis for that community, under the heading of "other groups." Because of the large number of justifications, the discussion of the results of the research emphasized justifications that were mentioned across all groups at the facilitated tables at any given meeting, and thus replicated. Justifications falling under the other headings were provided for each community and mentioned, but they were not always the main focus of the discussion.

A cross-case community comparison also was conducted to identify patterns across the 18 communities in terms of their 1999 current situation. Its purpose was to identify which communities might be more at greater risk from outside changes, based on both the quantitative and qualitative data. Salient justifications for the ratings were used to reinforce interpretation of the common patterns for the current (1999) situation. Likewise, in the analysis of the three alternatives, a similar process was followed to examine

the forecasts participants made about changes to the community in the year 2020 due to each pathway.

The results of this analysis were first assessed for alternative A1, the “no action” pathway, with the existing hydro-system and waterway maintained in its current condition on into the year 2020. This forecast provided the basis for assessing the impacts of A2 (“major modifications of the existing hydro-system on the lower Snake River”) and A3 (“natural river drawdown and dam breaching on the lover Snake River”). A2 and A3 were analyzed to identify changes of clustered numerical ratings and qualitative justifications from the baseline forecasts under A1. The patterns of these changes were examined across types of communities developed on the basis of several key criteria, including the nature of their relationship to the river, their economic base and level of diversity, and population size, among others.

4.2.6. Results

A primary output of this process was development of a typology of communities, or array of kinds of communities having common characteristics. This typology was used to understand the range of kinds of communities found in the region and potential impacts on them. Forum participants in agriculturally based communities and trade center cities closest to the Lower Snake River perceived the impacts of dam breaching on their communities to be the most severe and adverse due to increased transportation, utility, and other costs. Participants in agriculturally based communities in the “down river region” closer to the Columbia River exhibited more of a “halo effect” in their assessment of impacts, reflecting their antipathy towards the federal government and their belief in a domino effect of dam breaching. Likewise, participants in agriculturally based communities on the upper Snake River perceived the impacts of dam breaching more negatively and as more likely to create adverse community effects than did participants from other upriver communities. These communities saw themselves less directly related to fish recovery issues and more influenced by increased costs of doing business. Similar results were found for traditionally multiple resource-use communities in the upriver region in which irrigated agriculture and timber continue to play major roles. In contrast, participants in other multiple resource-use type communities suggested they were likely to be directly and negatively affected by loss of salmon runs, and that the impacts of breaching on their communities would be most positive and beneficial. Similar results were found for upriver trade center type communities; the relationship of these trade center communities to the lower Snake River is primarily indirect, with participants perceiving direct impacts on them in terms of a diminished quality of life and community character.

5. Opportunities and Limitations of Community-based Assessment Methods for Socioeconomic C&I (SECI) for Sustainable Forest Management

The intent of C&I systems is to provide a framework for describing, monitoring, and evaluating progress towards the achievement of sustainable forest management. The methods described above suggest an overall approach for developing and implement-

ing processes to achieve a number of these C&I—specifically those concerned with criteria 6 and 7.

Opportunities for community-based assessment methods for socioeconomic C&I present both strengths and weaknesses, advantages and disadvantages. On the positive side, these methods represent an in-depth, substantive, and collaborative approach to community assessment. The assessment of the realities of communities' current situations and how those conditions are perceived by community members can aid in the maintenance and improvement of long-term multiple socioeconomic benefits to meet the needs of societies—especially the economic, cultural, social, spiritual and recreation and tourism needs and values needs of forest dependent communities—in ways that can help ensure their viability and adaptability in the face of changing economic conditions. These processes provide an approach for supporting existing frameworks, both legal and institutional, for the conservation and sustainable management of forests. The community self-assessment process can play an integral role in forest-related planning, assessment, and policy review, providing opportunities for meaningful and substantive public participation in public policy and decision making related to forests, and ensuring the public's access to needed information.

One limitation of the impact-assessment methodology, and thus its findings, is that the results of this assessment must be interpreted, understood, and used within the qualitative and quantitative research framework. Care was taken, for example, in the Lower Snake Community-based Social Impact Assessment to employ conservative statistical analyses such as the use of median ratings within communities and replication logic as opposed to sampling logic to make scientifically defensible inferences. The ratings presented were not deemed representative of the total population of the communities studied. Rather, they were suggestive of the diversity of perceived effects and associated justifications from citizens who are actively involved in their communities or interested in the salmon recovery issue.

In addition, when the strengths and weakness of this community-based C&I approach to social impact assessment are compared to traditional methods, such as key informant interviews, secondary data analysis, polling, and survey research, other limitations must be recognized. When criteria including monetary and time expenditures and the necessary expertise of the facilitators are considered, this methodology must be deemed quite costly in comparison to others.

However, the value of this methodology for community-level assessment is likewise quite high if the involvement of local residents and a maximum public awareness of complex issues is a high priority. What is gained from these methods is the stimulation of meaningful public dialogue and more careful, reasoned, and informed judgment, as well as the education of members of the public—both by fellow community members and by experts conducting research on topics related to those judgments. The methods promote "social learning" (Reich 1985), in that they promote the recognition of community members as community experts, promote participatory democracy and empower communities, facilitate community dialogue, and capture the diversity of community

knowledge. In so doing, they increase the quality of public judgement that is based on more complete knowledge and careful consideration of the consequences of different actions that might be taken (Yankelovich 1991).

Nonetheless, it is critical to stress that applications of the results of these methods can vary across communities and the geographic regions being assessed. The impacts and the communities assessed are unique, and each community has different capabilities to deal with distinct direct, indirect, and perceived impacts. There may be common themes across all community types or within all community types, but there is not one single, "one-size-fits-all" set of impacts across all communities. Beyond this caveat, however, it is important to stress that efforts to incorporate C&I into this approach to action research, and further development of this research approach with attention to C&I, will only enhance the values and application of both for improved efforts for the conservation and sustainable management of forests.

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Building Collaborative Approaches to Salmon Recovery

By Connie Lewis, Meridian Institute, Dillon, CO

Overview

The Meridian Institute has been working with former Environmental Protection Agency administrator William Ruckelshaus for the last few years to help design and implement a collaborative approach to salmon recovery in the Puget Sound region of Washington and to a lesser extent in the Willamette River basin in Oregon. Meridian's efforts to help facilitate the creation of "shared strategies" among numerous federal, state and local agencies, tribal governments, the business sector, the environmental community, and other concerned and effected interests has been a daunting challenge and is still a work in progress.

The Situation[1]

Up and down the northwest coast of North America some species of salmon are in trouble. In Puget Sound, the National Marine Fisheries Service (NMFS) has said that the Chinook and Hood Canal Summer Chum are threatened with extinction and the Fish and Wildlife Service (FWS) has listed the bull trout as threatened too. There are probably more to follow. Under the Endangered Species Act, the federal government (in the case of Chinook and Chum—NMFS) must act to preserve any threatened or endangered species. Under that same law, NMFS has the obligation to issue a 4(d) Rule or regulation as "deemed necessary for the conservation of the species." This is essentially a "stop the bleeding rule." A 4(d) Rule will not in and of itself cause the salmon to recover. In the last analysis, no single level of government has the wisdom or resources to accomplish the job of recovery on its own. We are all in this boat, in the same watershed, together and the sooner we realize it the more progress we will make… all levels of government have a role in a salmon recovery but when it comes to the watershed, the predominant role must be local.

Recovering salmon in the Puget Sound region will be one of the most challenging social, economic, and environmental problems the region has ever addressed. For the region to move forward on recovery from here, it will need to attend to several key issues. It needs a *shared strategy,* a common sense of how the people of the region are going to move forward together. It needs goals to know where it is going, and there must be agreement on who will do what. There must be increased policy and scientific coordination. And, it must develop efficient and effective financing for its efforts, and the public must be engaged in the work of recovery.

The goal of recovering threatened salmon is widely supported by people living in the region, and the benefits of success will be significant. Salmon recovery will not be successful without changes in behavior by governments, the private sector, NGOs, and individuals. These changes will come with costs, and there are serious risks that these

[1]Excerpted in part from William Ruckelshaus's opening remarks at the Port Ludlow Workshop.

costs could escalate dramatically—possibly to politically unbearable levels—if the recovery effort is ineffectively managed. If funds are not spent on the highest priorities, if legal battles halt both environmental protection and development projects, or if regulations are inefficient, recovery will come only at a very high price, if at all.

The Process

In 1998 William Ruckelshaus began working with the Meridian Institute, with support from the Bullitt Foundation and the Washington Roundtable, to convene a collaboration between the environmental and business communities with the goal of encouraging constructive dialogue in advance of the formal "listing" of salmon and related species in the region. The sense of the collaboration, as well as among many in the region, was that salmon recovery was not going to be possible without a significant increase in communication and coordination between diverse parties, all of whom have a role to play in salmon recovery.

With this in mind, key leaders from a wide range of interest groups and governmental entities gathered together in Port Ludlow in October, 1999, at the invitation of Bill Ruckelshaus and former governor and U.S. Senator Dan Evans. The goal of the Port Ludlow Salmon Leaders Workshop was to provide an opportunity for a diverse group of key leaders to discuss the need for the development and implementation of a shared strategy for salmon recovery in Puget Sound. The major conclusions of the workshop were:

1. The Puget Sound salmon recovery strategy will require a shared approach and there is a commitment to moving forward as a region to take concrete steps to design and implement such an approach.
2. Interim and long-term goals and performance measures are needed at the watershed and evolutionarily significant unit (ESU) levels and it will require an iterative process among all levels of government and citizens to establish them.
3. The shared approach to recovery must build upon and support existing efforts.
4. The strategy should: a) incorporate incentives for action; b) integrate early actions and recovery planning; c) be efficient and result oriented; and, d) fairly serve all parts of Puget Sound.
5. The goal should be sustainable and harvestable levels of fish.

As articulated by the forum participants, the shared strategy will have the following elements: a) goals, b) policies and program coordination, c) science, d) financing, e) public education and participation, f) regulatory programs, and g) monitoring. All of these elements are critical and are integrally linked. The workshop participants discussed those elements for which coordination is imperative and made recommendations about how to craft an overall shared strategy. Key individuals made specific commitments to help lead and organize activities where a shared approach is required.

The initiative is now focused on helping coordinate, and where appropriate, provide staff support to help implement these commitments, and communicate progress to the Port

Ludlow workshop participants and others concerned with salmon recovery. A proposal is circulating to establish a "Puget Sound Salmon Forum" to provide the "glue" that will be needed to make real progress in Puget Sound on a shared strategy for salmon recovery. The forum is not intended to be a new institution, but rather a coordination and integration process that will build upon the good work that is already underway.

The Forum will accomplish its objectives in several ways:

- By providing a catalyst for people to cross traditional geographic and institutional boundaries to understand respective interests and to work together to accomplish elements of the strategy.
- Through the establishment and maintenance of ongoing communication networks, such as the listserve process, an e-mail newsletter, and a leadership steering committee.
- By convening diverse parties in work teams to address critical issues, such as the need for strategically focused education and public information activities.
- By helping develop a shared understanding of what success will mean and how to measure progress towards that goal.
- By convening two additional workshops, such as Port Ludlow, where diverse groups of key decision makers can interact and develop proposals, help set priorities, and overcome barriers that stand in the way of implementing a shared strategy.
- Documenting and publishing the common understandings and agreements in a manner that informs a broad and diverse audience across Puget Sound.

In addition, the forum will provide an opportunity for diverse groups to focus systematically on the "levers of change" in Puget Sound that will need to be addressed to truly have a positive affect in reaching recovery goals.

Results and Lessons

A great deal has been accomplished through the collaboration, the Port Ludlow workshop, and the efforts to develop a Puget Sound Salmon Forum. However, progress has been slower than hoped, and the going has been rough at times. There are a number of lessons that can be gleaned from this "work in progress," and no doubt much more will be learned in the coming months and years.

- Most of the leadership and momentum has derived from one amazing person, William Ruckelshaus. The good news is that someone of his caliber, integrity, and recognition has been willing to "step up to the plate." The bad news is that when illness and other commitments have diminished the amount of time and energy he dedicated to the effort it suffered. This suggests the need to identify, empower, and support others with leadership capacity.

- Staffing and facilitation for the effort has been mostly provided by the Meridian Institute, which is headquartered in Dillon, Colorado, and with whom William Ruckelshaus has had a long-standing relationship. Meridian has been effective in providing strategic advice and facilitation for key meetings, but has been unable to provide the day-to-day networking and staff support needed to maintain momentum. No one else in Puget Sound has been explicitly authorized or funded to serve the kind of support function that has been missing (although efforts are underway to identify and fund someone to assume that role).
- It was relatively easy to raise funds for the collaboration and the Port Ludlow workshop, but has been more challenging for the ongoing effort to create a "shared strategy." More focused attention and effort is needed to generate the necessary funding.
- There is a bit of a catch-22 in that the effort is non-governmental, broadly inclusive, and fairly ad hoc. This can be seen as a strength but creates some challenges as well. Aside from Mr. Ruckelshaus, there has been no "center of gravity" to bring groups together and guide the effort. While Mr. Ruckelshaus has tremendous credibility, he lacks explicit authority or authorization to lead a "shared" salmon recovery strategy. At some point, a legislative (or some other kind of) directive might be very useful.

Biographies & Contact Information

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Guy Burgess received his Ph.D. in sociology in 1979 from the University of Colorado, where he worked for five years as a research assistant to Kenneth Boulding, one of the founders of the conflict resolution field. His dissertation and his postdoctoral work at MIT focused upon the many social and political problems that undermine society's ability to make wise, equitable, and efficient decisions regarding complex environmental issues. Following several years as a consultant to a number of real world policy-making processes, Burgess joined forces with his wife, Heidi, and several other colleagues to establish, under the Hewlett Theory Center program, the University of Colorado Conflict Research Consortium. Over the years the Consortium's theoretical work has focused upon the development of more constructive ways of approaching intractable conflicts—those difficult disputes that defy current generation of conflict resolution strategies. Burgess and the Consortium have also been at the forefront of efforts to harness the power of the World Wide Web as a tool for better delivering conflict-related information to practitioners, educators, students, and disputants. He is codirector of the new CRInfo project—a major Hewlett-funded initiative involving a fieldwide effort to strengthen the field's underlying information infrastructure. Contact: (303) 492-1635 / Fax (303) 492-2154

Maria Burks, a manager for the National Park Service, graduated from the University of Pennsylvania with a degree in anthropology. She has worked for the National Park Service since 1973. She joined the Service at Independence National Historical Park in Philadelphia, where she served as a park ranger, giving tours and managing special events during the bicentennial. After a transfer to the Golden Gate National Recreation Area in San Francisco in 1983, Burks served as the Bay District ranger, managing such diverse resources as a regional visitor center and Alcatraz Island, home of the famous penitentiary. In 1989 she was named superintendent of Fredericksburg and Spotsylvania National Military Park, a Civil War park, in Fredericksburg, Virginia. Subsequently, Burks served for two years as special assistant to the director in Washington, working on a number of internal reform and reorganization projects. Burks presently serves as superintendent of Cape Cod National Seashore, headquartered at South Wellfleet, Massachusetts. The National Seashore contains over 43,000 acres of ocean and bay beaches, historic lighthouses, salt marshes, kettle ponds, and remnants of centuries of human habitation. Contact: (508) 349-3785 / Fax (508) 349-9052 / Maria_Burks@nps.gov

Darcy Bushnell is the water rights judicial clerk for the U.S. district court for the District of New Mexico. Ms. Bushnell has worked in the water rights adjudication area since 1987. As judicial clerk for the court, she drafts opinions, manages cases, and serves as a mediator. As a mediator, she worked on the Rio Grande Project quiet title action filed in the New Mexico federal district court, which had as parties the United States, three states, two irrigation districts, two cities, a tribe, and private interests, and which addressed technical issues in the water allocation and distribution arena. Contact: (505) 348-2212 / Fax (505) 348-2212 / dbushnell@nmcourt.fed.us

Joan Calcagno joined the U.S. Institute for Environmental Conflict Resolution in September of 1999. Before that, she was engaged in a number of professional endeavors. Through her conflict resolution business, she provided mediation and arbitration services, training in essential collaborative conflict resolution/negotiation skills, and negotiation consultation. She also mediated cases as a settlement judge pro-tem for the Arizona Superior Court. As an adjunct assistant professor, she taught mediation to law students and conflict resolution to public policy graduate students in an interactive format. She worked part-time as an aministrative law judge for the Arizona Department of Economic Security. Calcagno also cohosted a local call-in radio program "What's Your Problem?: Creative Conflict Resolution." She has

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James G. Cantrill, Ph.D., currently serves as the U.S. chair for sustainability foci associated with the binational Program to Restore and Protect the Lake Superior Basin. This U.S.—Canadian initiative, sanctioned by the International Joint Commission, draws together representatives from federal, state, provincial, and tribal agencies dedicated to natural resource management and environmental protection in a watershed containing ten percent of the available freshwater on Earth. In particular, he has directed the development of those portions in the recently released lakewide management plan for Lake Superior dealing with balancing the social, economic, and environmental dimensions of regional ecosystem management. In addition to his duties to the Lake Superior binational program, Cantrill is a professor of communication studies at Northern Michigan University, the president of the Central Lake Superior Land Conservancy, and sits on the board of directors for a number of other environmental organizations. With a research specialization in the human dimensions of ecosystem management and the emerging field of conservation psychology, his most recent book, *The Symbolic Earth*, focuses on the role perception and communication play in the process of environmental advocacy. Contact: (906) 227-2061 / Fax (906) 227-2071 / jcantril@nmu.edu

Christine Carlson is co-director of the Policy Consensus Initiative (PCI) in Santa Fe, New Mexico. PCI works with state leaders to establish and strengthen the use of consensus building and conflict resolution in states. Carlson has been active in the conflict resolution field for more than fifteen years, serving as mediator, facilitator, trainer, and consultant. She has held a number of positions in the field of conflict resolution and consensus, including executive director of the Ohio Commission on Dispute Resolution and Conflict Management, and cochair of the Society for Professionals in Dispute Resolution (SPIDR) Environment/Public Disputes Sector. She also worked as program and legal officer at the Kettering Foundation and has served as a local elected official. Contact: (505) 984-8211 / Fax (505) 820-6836 / chris1250@aol.com

Bob Chapman is the chairman of the Pawnee Tribe of Oklahoma. He has been involved in tribal governance for many years and is highly respected among his peers. He served as the representative of the Pawnee Tribe on the panel of tribal leaders established during the course of the Chilocco Indian School dispute. Always a voice of reason in the midst of emotional debate, Chairman Chapman was instrumental in building the tribal consensus needed to facilitate resolution.

Sheldon Clark is the president of the board of directors of the Sonoita Crossroads Community Forum, a volunteer, nonprofit organization working to promote community stewardship and planning in the Sonoita-Elgin area of southeastern Arizona. He is also the principal hydrologist at Groundwater Resources, Inc., in Tucson, Arizona. Mr. Clark has twenty-three years of experience as a consultant in water resources in the western United States and South America. He received a B.S. in biological sciences from The University of Arizona, where he also pursued a variety of post-graduate studies in geology and geochemistry. Contact: (520) 455-4711 / Fax (520) 747-3491 / recharge01@aol.com

Richard C. Collins, AICP, is the Lawrence Lewis, Jr., Professor of Architecture and Planning in the School of Architecture at the University of Virginia and director of the Institute for Environmental Negotiation, which he founded in 1981. The Institute for Environmental Negotiation has been a leader and pioneer in the field of environmental mediation. Dr. Collins has written numerous articles in the broad field of urban and environmental planning and policy as well as on aspects of environmental decision making and conflict resolution. He has worked with a variety of federal agencies, and in Virginia he has been involved with the state water control board, the Department of Health, the Department of Waste Management, the Council on the Environment, and the Chesapeake Bay Commission, among others. Dr. Collins has a degree from the University of Wisconsin, LaCrosse, and a Ph.D. from the University of Colorado in political science and public administration. He was formerly on the staff at the Federal Executive Institute, the University of Oregon, the Executive Seminar Center at U.C. Berkeley, and Seattle University. Contact: (804) 924-1970 / Fax (804) 924-0231 / rcc3@virginia.edu

Alex Conley is a research assistant at The University of Arizona's Udall Center for Studies in Public Policy. He works on projects related to collaborative and community-based natural resources management and writes for and helps edit *Communities and Forest*, a community forestry newsletter. He has assisted with Dialogue San Pedro (which focuses on water issues in the San Pedro Rive Basin), the Common Ground Roundtable (a discussion group focusing on grazing issues), and the public input process for the Commission for Environmental Cooperation's report on the San Pedro River. He is currently a master's student in the renewable natural resources studies program at The University of Arizona, where his research focuses on the role of forestry and rangeland management. Conley has researched and worked in forestry in New England, and spent four years working on agroforestry projects in Senegal (West Africa) as a Peace Corps volunteer and trainer. Since returning to the States, Conley has developed an informational packet on the conservation of pollinators in agricultural setting for the Forgotten Pollinators campaign and has worked as the coordinator of a volunteer work program at Saguaro National Park. Contact: (520) 322-9087 / Fax (520) 884-4702 / conley@u.arizona.edu

Thom Corcoran, of ESI Communications (Portland, Oregon), brings more than twenty-five years of experience in the areas of conflict resolution, communication, and group process. Recently retired from a career with the U.S. Forest Service, Corcoran honed his ADR skills on many of the recent environmental issues in the Pacific Northwest. Corcoran's recent work has focused primarily on group ADR processes, including the Oregon Fish Passage Task Force, the emergency listing of the California Tiger Salamander, and the Portland Development Commission-Lents community redevelopment. Contact: (503) 762-2276 / tcorc@aol.com

Caren Cowan is the executive secretary for the New Mexico Cattle Growers' Association (NMCGA), based in Albuquerque. Previous to joining NMCGA in July 1997, she served as executive director of the New Mexico Wool Growers' Association for seven years. Cowan was reared on a commercial beef cattle operation near Tombstone, Arizona. She is a graduate of The University of Arizona with a B.S. in agricultural communications. In addition to government affairs work, her experience includes many years as editor of national breed publications. Cowan's great grandfather settled in the Tombstone area in the late 1800s. She hopes to preserve the ranching way of life for her nine-year-old nephew, Dub. Contact: (505) 247-0584 / Fax (505) 842-1766 / nmcg@rt66.com

Marion Cox owns and manages RE♦SOURCE ASSOCIATES, an environmental services consulting firm located in Santa Fe, New Mexico, and Bethesda, Maryland. Ms. Cox brings to RE♦SOURCE ASSOCIATES over 25 years of experience in environmental planning and resource management. The company provides services to government agencies, private sector clients, and communities in the primary areas of public interaction planning and program implementation, conflict management and negotiation, risk communication, and training. The firm's services include impartial third-party assistance in issue identification and problem solving, meeting planning and meeting facilitation on issues of local and national importance, strategic planning and consulting on the design and implementation of public participation programs and conflict management strategies, and training design and delivery to support the effective implementation of environmental management strategies. Contact: (301) 951-3386 / Fax (301) 982-9331

Deborah Dalton is a conflict management specialist with the Conflict Prevention and Resolution Center at the Environmental Protection Agency. As such, she advises EPA program office and regional office management on the selection and implementation of various consultation, consensus-building, and dispute resolution procedures for use in developing rules, implementing policy and prosecuting enforcement actions. She is coauthor/coeditor of the primary reference book on regulatory negotiation, *Sourcebook on Negotiated Rulemaking*, published by the Administrative Conference of the United States in 1995. Ms. Dalton is the project officer for the only contract in the federal government providing access to a full range of dispute resolution services (facilitators, mediators, arbitrators) for both regulatory and enforcement dispute resolution. Ms. Dalton teaches negotiation and dispute resolution with the Environmental Protection Agency, the Department of Justice Legal Education Institute, and the Office of Personnel Management Western Executive Seminar Center. She has a B.S. from the College of William and Mary in psychology, an M.S. from the University of Virginia in biology, and was trained as a mediator in the Washington, D.C., Superior Court Multidoor Courthouse Program. Contact: (202) 564-2913 / Fax (202) 501-1715 / dalton.deborah@epamail.epa.gov

Fatima C. Dames is a member of the Mashantucket Pequot Tribal Nation located on Mashantucket, Connecticut. In 1995, she received a B.S. in legal studies from John Jay College of Criminal Justice. Recently, she received an M.A. in American Indian Studies from The University of Arizona. Currently, she is pursuing an associate's degree in business administration from Mitchell College. She is also planning to attend law school in the fall of 2001. Presently, she is employed as the special assistant for legal affairs to Council Member Michael Thomas. As part of her civic/community involvement, she is the vice chairwoman of the Mashantucket Pequot Tribal Nation Judicial Committee and she was recently elected to serve a three-year term for the Peacemakers Council. In addition, she is the president of the New England Coalition for Justice, a nonprofit organization based in Ledyard, Connecticut. Mrs. Dames is also a board member of the Eastern Connecticut Chamber of Commerce.

William David is currently enjoying a stint as a junior consultant for the Marasco Newton Group, a consulting and conflict resolution organization based in Arlington, Virginia. He has worked on environmental issues for nearly two years, focusing on tribal environmental issues. These activities have included chemical contamination, conservation, environmental education, and environmental assessment. While serving the Mohawk community of Akwesasne, he formulated cross-cultural protocols for the Ontario Ministry of Natural Resources. Since then, he has assisted with the delivery of cross-cultural training seminars for the EPA. Mr. David holds a bachelor's degree in environmental engineering with concentrations in chemistry and environmental policy. Contact: Tel: (703) 292-5938 / wdavid@marasconewton.com

John H. Davidson is an attorney, has been involved in Missouri River issues since the early 1970s, and is also an experienced advocate for the environment, with a special interest in river and agricultural issues. He most recently served as a Presidential appointee to the Western Water Policy Review Commission. Davidson is the author of a number of books and articles dealing with water and agricultural issues, and is frequently involved as an advocate in support of environmental NGOs. He is currently professor of law at the University of South Dakota School of Law in Vermillion, South Dakota. Contact: (605) 677-6341 / Fax (605) 677-5417 / jdavidso@usd.edu

Kathleen Davis is chief of natural resources for the Southern Arizona Office, National Park Service, Department of the Interior. In 1985 she transferred to the Southern Arizona Office, a support office working primarily with ten national park units. Duties include compliance and planning; management of vegetation, fire, domestic livestock, and water; integrated pest management; inventory and monitoring program; and research. In 1996 she became the national livestock management coordinator working on policies and guidelines, training, and planning. From 1994 through 2000 she was chairperson for a national initiative, Resources Careers, to enhance professional resources management careers in the National Park Service. Davis received a B.S. in forestry and an M.S. in fire science in 1977 from the University of Montana, and has written publications about fire history, ecology, and safety. Contact: (602) 640-5250 / Fax (602) 640-5265 / kathy_m_davis@nps.gov

Tamra Pearson d'Estree is associate professor in the Institute for Conflict Analysis and Resolution (ICAR) at George Mason University. She previously served as assistant professor in psychology and communication at The University of Arizona, where she was also a fellow of the Center for Middle Eastern Studies and the Udall Center for Studies in Public Policy. She holds a B.A. in political science and in psychology from the University of Colorado, and an A.M. in psychology and Ph.D. in social psychology from Harvard University. Contact: (703) 993-1364 / Fax (703) 993-1302 / tdestree@gmu.edu

Tom DeWitt is currently Hydro East Group 1 Leader in the Division of Environmental and Engineering Review, Office of Energy Projects, Federal Energy Regulatory Commission. The Group carries out responsibilities under the Federal Power Act, environmental and other statutes, Commission regulations, and court rulings, and is responsible for the technical, engineering and environmental reviews for license, relicense, and exemption applications for hydroelectric projects, primarily in the eastern part of the country. The Group is one of five licensing groups with similar structure but separate geographic responsibilities. Mr. DeWitt attended the State University of New York, College of Environmental Science and Forestry, and Syracuse University, where he received a Bachelor of Science degree in 1973 and a Bachelor of Landscape Architecture degree in 1974. Contact: (202) 219-2821 / Fax (202) 219-0205 / thomas.dewitt@ferc.fed.us

Mac Donaldson, born in Tucson, is a second-generation rancher. His father has been ranching since World War II. At one time they owned three ranches, two in Arizona and one in New Mexico. Donaldson received his B.A. from the Technical College in Sydney, Australia. After receiving his degree he returned to the United States, where he raised horses from 1972-1978 and then joined the cattle business from 1978-1988. He worked for Agratech in Colorado and managed grass cattle from 1988-1991. From 1991-1993 he was a cattle manager for ranches in Colorado and Utah. In 1993 he returned to the family business, the Empire Ranch, where he continues to work today. At the Empire Ranch and throughout his life, he has been committed to managing resources for the good of the resource and the health of the community. Contact: (520) 456-2315

Mary Doyle is the acting assistant secretary of Interior for Water & Science. The assistant secretary for Water & Science oversees the Bureau of Reclamation and the U.S. Geological Survey. Ms. Doyle, who has been counselor to the secretary since August 1999, previously served as dean and professor of law at the University of Miami School of Law in Coral Gables, Florida. She brings to the position several decades of experience in the legal, political, and scientific aspects of environmental policy, including her recognized national expertise in the restoration of the Florida Everglades and other prominent departmental issues. During her tenure at the University of Miami Law School, Doyle was also dean-in-residence at the Association of American Law Schools in Washington, D.C. During the 1980s, Doyle served as a professor of law at The University of Arizona College of Law, specializing in water, land use, local government, and property law and subsequently served as both a professor of law and the associate dean for academic affairs. From 1979 until 1981, Doyle served as an attorney at the Department of Energy, then as associate general counsel and deputy general counsel at the U.S. Environmental Protection Agency. Doyle is a graduate of Radcliffe College and received her law degree from Columbia Law School.

Tracy Drummond has been the Catron County Agricultural Agent for the past three years. He conducts agricultural and natural resource educational programs for both youth and adults. Prior to being the agent in Catron County, he served as the county agent in Otero County. Both Catron and Otero counties are primarily made up of public land. Much of his time is spent dealing with public policy issues, such as endangered species, timber and range management.

E. Franklin Dukes is associate director of the Institute for Environmental Negotiation at the University of Virginia. His work includes designing dispute resolution and public participation processes, mediation and facilitation, teaching and training, mediation and consensus building, and research and writing. He has worked at local, state, and federal levels, on projects involving environment and land use, community development, education, health, and racial and ethnic diversity. His most recent book, *Resolving Public Conflict: Transforming Community and Governance,* describes how public conflict resolution procedures can assist in vitalizing democracy by engaging citizens productively in civic and community affairs, by aiding public entities in developing a responsive governance, and by enhancing society's capacity to solve difficult public problems. With two colleagues he is currently completing a book for Jossey-Bass called *Reaching for Higher Ground: Building Shared Expectations for Community in the Midst of Conflict* that describes how groups can collectively create expectations for addressing conflict with integrity, vision, and creativity. Dr. Dukes received a B.A. from the University of Virginia and an M.S. and Ph.D. in conflict analysis and resolution from George Mason University. He was previously operator of a piano restoration business for over ten years in Albemarle County. Contact: (804) 924-2041 / Fax (804) 924-0231 / frankdukes@virginia.edu

Richard Duncan's practice focuses on environmental and anti-trust litigation and federal Indian law. He is admitted to practice in the State of Minnesota; in the federal courts in the District of Minnesota, in the U.S. Court of Appeals for the Eighth, Ninth, and Tenth Circuits; and in the U.S. Supreme Court. He has also practiced before administrative agencies of the federal government, the State of Minnesota, and the State of Iowa, and has testified at hearings of the Minnesota legislature on environmental matters. Duncan has represented Indian tribes in Minnesota and Wisconsin, and has taught Indian law at the University of Minnesota Law School. In the area of environmental litigation, Duncan has participated in cases ranging from representation of victims of major oil spills to nationally significant public lands and wildlife litigation against the federal government.

Kirk Emerson is the director of the U.S. Institute for Environmental Conflict Resolution. In addition to administering the Institute's program, Dr. Emerson is actively involved in mediating environmental disputes and designing and facilitating public consensus building processes and dispute resolution systems. Emerson holds a Ph.D. in political science and public policy from Indiana University, a master's degree in city planning from Massachusetts Institute of Technology, and a B.S. from Princeton University. She has professional training and experience in mediating land use and environmental disputes, and facilitating community dialogues and consensus building processes. Prior to her appointment to the U.S. Institute, Dr. Emerson developed and coordinated the environmental conflict resolution program at The University of Arizona's Udall Center for Studies in Public Policy, where she conducted research, taught, and directed several conflict management and public involvement projects involving water resources, endangered species, and western range policies. Dr. Emerson has taught graduate and undergraduate courses on conflict resolution and environmental law and has written on environmental mediation, land use law, and environmental policy. Contact: (520) 670-5299 / Fax (520) 670-5530 / usiecr@ecr.gov

Mike Eng joined the U.S. Institute for Environmental Conflict Resolution as a senior program manager in April 2000. He formerly worked at the National Oceanic and Atmospheric Administration's Coastal Services Center in Charleston, South Carolina, where he provided process design, facilitation, and training development services to the coastal management community throughout the United States. His activities have involved federal, state, and local agencies as well as resource user groups, nongovernmental organizations, and tribal governments. He has broad experience in natural resource policy and marine resource management and he has extensive knowledge and expertise in facilitation, mediation, and consensus building. He is also well-versed in designing and facilitating public participation processes. At the Coastal Services Center, Eng also served as a facilitator and consultant to NOAA's organizational change process focused in improving the agency's ability to effectively manage diversity. Contact: (520) 670-5299 / Fax (520) 670-5530 / eng@ecr.gov

David Fairman is vice president at the Consensus Building Institute. He facilitates the development of consensus on public policies and projects, with a focus on environmental protection, land use, housing, and economic development. His environmental projects include facilitation of a sixty-member advisory group that seeks consensus on the management of low-level radioactive waste in Maine, facilitation of multi-stakeholder teams involved in environmental management at the Massachusetts Military Reservation, and assessment of conflict management strategies for public forest lands in Southeast Asia and Central America. He is currently facilitating two groups involved in Superfund remediation and radiofrequency radiation risk assessment at the Massachusetts Military Reservation, with stakeholders including the U.S. Air Force, EPA, state regulatory agencies, local governments, and citizen groups. He recently completed a negotiated rule making with the U.S. Department of Housing and Urban Development. Other recent and current clients include the Northeast Connecticut Council of Governments (facilitation of a regional policy dialogue on human services and economic development), IBM (designing a negotiation training module for all new IBM professional employees world-wide), and USAID (co-authoring a guide to alternative dispute resolution programs for use by USAID staff worldwide). Dr. Fairman received his Ph.D. in political science from MIT. Contact: (617) 492-1414 / Fax (617) 492-1919

Juliette A. Falkner is director of the Office of the Executive Secretariat and Regulatory Affairs of the U.S. Department of the Interior. She has worked as a federal cochair or facilitator on four negotiated rule makings and served as an advisor for several others. Falkner graduated magna cum laude from Albion College in Albion, Michigan. In 1985, she received a Fulbright scholarship to study European labor policies in Germany. Falkner received her J.D. in 1990 from the Washington and Lee University School of Law in Lexington, Virginia. She is a member of the Arizona State Bar. Prior to joining the Department of the Interior, she served as a judicial clerk to U.S. District Judge Stephen M. McNamee in Arizona. Contact: (617) 492-1414 / Fax (617) 492-1919

Patrick Field is a vice president at the Consensus Building Institute, Cambridge, Massachusetts. He has convened and facilitated numerous complex environmental and organizational disputes, including the consolidation of three Department of Energy federal laboratories, a community-based coalition formed to investigate air quality and public health in four rural Maine towns, the cleanup of the Massachusetts Military Reservation Superfund site, and the Massachusetts Military Reservation Natural Resource

Trustee Council. He is experienced in working with multiple parties in politically and technically complex, multi-year cases. Mr. Field has taught negotiation and mediation skills for such clients as the Indian Taxation Advisory Board, the Canadian Energy Pipeline Association, IBM, Capital One, Union Camp Corporation, Georgia Environmental Protection Division, the Montana Consensus Council, and the National Park Service. He has co-written and researched numerous consulting reports, conflict assessments, and negotiation games for such clients as the Federal Energy Regulatory Commissioner, the Bureau of Land Management, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the Massachusetts Division of Energy Resources, the Delaware Department of Natural Resources and Environmental Control, and the Wyoming Open Lands Project. Mr. Field received his master's degree in city planning from Massachusetts Institute of Technology. Contact: (617) 472-1414 / Fax (617) 492-1919 / pfield@igc.org

Karen Firehock is a senior associate at the Institute for Environmental Negotiation and also teaches courses at the University of Virginia. She has conducted research for the Institute concerning the applications, needs, and structure of community-based collaboratives nationwide. Ms. Firehock has an M.P. in urban and environmental planning from the University of Virginia and a B.S. in natural resources management from the University of Maryland. Prior professional experience includes her job for a decade as national director of the Save Our Streams (SOS) Program for the Izaak Walton League of America, where she produced environmental videos and authored books in volunteer water monitoring, environmental advocacy, and habitat restoration, and taught project workshops. Contact: (804) 924-5041 / Fax (804) 924-0231 / kef8w@virginia.edu

Emmett P. Fiske recently returned from a year's sabbatical in Chile, where as a bilingual Fulbright senior scholar he offered several courses in environmental conflict resolution and began adapting such educational material for future distance (electronic) delivery. Since 1979 he has been associated with Washington State University, where he currently serves as a professor and organizational effectiveness specialist in the department of rural sociology, and member of the graduate faculty for the program in environmental science and regional planning. Dr. Fiske has facilitated a variety of environmental conflict resolution processes, including the Russian Wheat Aphid Forum, the Washington Water Resources Forum, and the Inland Northwest Field Burning Summit. He has written articles, case studies, and simulations in support of building institutional capacity to respond to environmental conflicts and controversies with timely and meaningful educational programs. Contact: (509) 335-6660 / Fax (509) 335-2125 / fiske@wsu.edu

Stephen Garon is a senior consultant and dispute resolution specialist for the Marasco Newton Group, a consulting and conflict resolution organization based in Arlington, Virginia. He has worked in the environmental dispute resolution arena for nearly ten years, focusing primarily on disputes associated with hazardous waste and hazardous waste site cleanups. These activities have included hazardous waste site-specific dispute resolution efforts; the planning, convening, and facilitation of issue-specific policy dialogues; and the planning and facilitation of public involvement forums. He also is a doctoral candidate at the Institute for Conflict Analysis and Resolution (ICAR) at George Mason University, researching conflicts over environmental risk to discern how definitions of risk are socially constructed in and by communities, and the implications of these risk construction processes for environmental dispute resolution (EDR) theory and practice. Through his affiliation with ICAR, he helped develop and pilot metaphor analysis as an assessment tool for disputes over natural resources. Garon is interested in the development of a more unified body of knowledge linking and integrating EDR theory, research, and practice. Contact: (703) 247-4061 / Fax (703) 292-5937 / sgaron@marasconewton.com

Suzanne Ghais, M.S., program manager at CDR Associates**,** is an experienced facilitator, mediator, trainer, researcher, and writer. In her three years with CDR, she has helped numerous government agencies, nonprofit organizations, and companies resolve organizational, environmental, and other public policy issues. Before coming to CDR, she was a dispute resolution trainer for the Council of Better Business Bureaus, training Better Business Bureau staff and volunteers throughout the country in mediation and arbitration of consumer disputes. She also mediated neighborhood, employment, landlord/tenant, and other disputes for four years at the Washington, D.C., Mediation Service. Ms. Ghais holds a master's degree in conflict analysis and resolution from George Mason University. Contact: (303) 442-7367 / Fax (303) 442-7442 / sghais@mediate.org

Petuuche Gilbert is a member of the Acoma Tribe in New Mexico. He is the realty officer for the Acoma Realty and Natural Resources Office and also a tribal councilman. He has worked for the tribe for over twenty years. For two years he represented the Acoma Governor on the Operations Committee for the Grand Canyon Transport Commission. Petuuche received his B.A. degree from the University of New Mexico and his M.A. from The University of Arizona, both in political science. Contact: (505) 552-6604 / Fax (505) 552-6139

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Karen A. Malkin, U.S. Department of the Interior, Fish & Wildlife Service (FWS), has coordinated FWS' Government Performance and Results Act Implementation, including strategic and annual planning, reporting, and evaluation, since February 2000. In her positions at DOI, she has earned Sustained Superior Performance Award. Special Achievement Award, Superior Performance Award, and Star Awards. In 1996-97, Malkin successfully completed Harvard Law School's Negotiation Workshops. She has published three articles on negotiation strategies and natural resource case studies, and developed training seminars on negotiation, environmental protection and compliance, and plain language. From 1990-93, Ms. Malkin served as chair for the District of Columbia Bar's Natural Resources Committee. From 1993-96, she was elected to a three-year term on the steering committee for the Bar's Environment, Energy and Natural Resource Section. In addition to the District of Columbia, Ms. Malkin is admitted to practice law in California and before the U.S. Supreme Court. Ms. Malkin received her B.A. degree from the Johns Hopkins University and J.D. degree from Georgetown University Law Center. Contact: (202) 208-4564 / Fax (202) 208-4584 / karen_malkin@fws.gov

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Tommie Martin, a pioneer in the collaborative process, has been involved in conflict resolution since the early 1980s. She contracts privately to teach, consult, and facilitate the holistic management of human, environmental, and economic resources in Africa, Mexico, and the United States. Martin compares and

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Frank R. Martinez has been a district ranger on the Mountainair Ranger District of the Cibola National Forest for ten years and highly involved with rural communities, most often land grant communities in areas that are underserved and have high unemployment. Martinez was born and raised in northern New Mexico in a small ranching/farming community by the name of Cebolla. He attended grade school in a four-room schoolhouse that housed grades pre-first through eighth grade. His grandparents on both sides of his family were ranchers and farmed to make a living; his father was a grazing permittee on the Carson National Forest. After Martinez graduated from high school, he earned a B.S. in biology from New Mexico Highlands University. He completed his studies in range management, watershed management, and wildlife management at New Mexico State University. Contact: (505) 847-2990 / Fax (505) 847-2238

William Maxon has spent the past twenty-five years working with diverse and high profile groups dealing with natural and cultural and economic issues. A graduate of the University of New Mexico School of Law, Maxon has worked with the Great Lakes Fishery Commission on internal resource issues affecting the Great Lakes business and regulatory concerns. He has served as director of legislation for a major conservation organization in Washington, D.C., and served as chief negotiator for salmon restoration in the Northwest. Maxon currently serves as the executive director of the Southwest Strategy. The Southwest Strategy is community development and natural resource conservation and management initiative by federal, state, tribal and local governments. Through this effort, the partners will work in collaboration with each other and the public to restore and maintain the cultural, economic, and environmental quality of life in the states of Arizona and New Mexico. Contact: (505) 255-0569 / bmaxon@blm.gov

Michael McCloskey has had a career working in environmental advocacy and managing environmental organizations. For thirty years he was a manager at the Sierra Club, serving as conservation director, executive director (for seventeen years), and chairman (for thirteen years). Early in his career he also represented the Federation of Western Outdoor Clubs and other regional groups in the Pacific Northwest. He has also served as the chairman of the Natural Resources Council of America and currently serves as chairman of the Mineral Policy Center. Recently he serves as cochairman of the Environmental Management Task Force of the President's Council on Sustainable Development. He is a member of both the Commission on Environmental Law and the World Commission on Protected Areas of the World Conservation Union. He also is an adjunct professor in the school of natural resources and the environment of the University of Michigan. He makes his home now in Portland, Oregon, where he does consulting. He is an honorary vice president of the Sierra Club. Contact: (503) 892-2664 / Fax (503) 842-2484

Matthew McKinney is the executive director of the Montana Consensus Council, a small state agency dedicated to building agreement on natural resources and other public policy issues. McKinney has spent the last fifteen years helping citizens and officials shape effective natural resource policy. He received a Ph.D. in natural resource policy and conflict resolution from the University of Michigan; has published numerous articles in journals and books; and teaches seminars, academic courses, and workshops on natural resource policy and public dispute resolution. Contact: (406) 444-2075 / Fax (406) 444-5529 / mmckinney@state.mt.us

Joseph McMahon serves as a mediator, arbitrator, and settlement counsel with the Denver firm of Davis, Graham and Stubbs. He began his law practice in 1978 and has been principally involved in litigation and alternate dispute resolution. Before practicing law, he was a water resource engineer. McMahon mediates environmental, construction, water, natural resources, employment, intellectual property, business disputes and intra-organizational conflict. He also serves as an ADR consultant or "settlement counsel" for individuals, small companies and large multi-national corporations. McMahon is a member of the Institute's National Roster of Environmental Dispute Resolution and Consensus Build-

ing Professionals, the Center For Public Resources Panel of Distinguished Neutrals, AAA National Panel, and the NASDR Roster of Mediators. McMahon has completed the basic and several advanced mediation courses at The Center for Mediation in Law. McMahon serves as a mediator for the Denver Victim-Offender Reconciliation Program. He has been a frequent trainer in ADR and settlement, and has regularly published ADR articles. McMahon received a B.S. in engineering science from the Air Force Academy (1966), an M.S. in engineering (1973), and a J.D. (1978) from the University of Denver. He works with Water For People, an international NGO providing water, sanitation, and health projects in developing countries. Contact: (303) 892-7350 / Fax (303) 893-1379 / jmcmahon@attglobal.net

Deborah Medders' professional experience is in the fields of certified mediation, clinical psychology and counseling, intergovernmental relations, and consulting to governmental agencies and nonprofit organizations—particularly in cross-jurisdictional administrative and regulatory law. She has additional practice in alternative dispute resolution program and process design, both as a planner and trained mediator / facilitator. Medders has been involved for nine years with a Native American community, which received federal acknowledgement as an Indian tribe in 1987, designing and establishing programs, and negotiating government-to-government agreements with municipal, state and other tribal jurisdictions. Her academic study and advanced degrees are in the area of sociology, social welfare studies, Mexican/Latin American studies and family systems and counseling. Contact: (508) 693-1039 / Fax (508) 693-1039 / dmedders@vineyard.net

Monica Medina has a broad range of environmental and government relations experience and has served in several positions in both the executive and legislative branches of government. Prior to joining Heller Ehrman, Medina was the general counsel of the National Oceanic & Atmospheric Administration of the Department of Commerce. In that position, she worked closely on natural resource damages restoration cases, on negotiations of habitat conservation plans, and on Pacific Salmon Endangered Species Act issues. She has also served as Deputy Associate Attorney General at the Department of Justice, specializing in environmental law and litigation. While at the Department, she advised the Attorney General on environmental legislation and law, including the settlement of some of the largest environmental enforcement cases in history, and she argued two cases before the 9th Circuit Court of Appeals. Prior to her tenure at the Department, Ms. Medina served as senior counsel to the Senate Environment and Public Works Committee. As senior counsel to the Committee, Ms. Medina had principal responsibility for oversight of Clean Air Act implementation, climate change issues, the National Environmental Policy Act, and water resources projects. Medina is a former Captain in the U.S. Army, where she served in the Army General Counsel's Office Honor's Program. She attended Georgetown University (B.A., *cum laude*, 1983) and Columbia University Law School (J. D., Harlan Fiske Stone Scholar, 1986). Contact: (202) 263-8998 / Fax (202) 785-8877 / mpmedina@hewm.com

Richard Miles has been with the Federal Energy Relatory Commission for over twenty-eight years. In 1999, he was appointed director of the Dispute Resolution Service. From 1988 until March 1999, he was the associate general counsel for administrative litigation within the Office of the General Counsel. During this period he was responsible for the work performed by the Commission's trial attorneys in oil, gas, electric, and hydroelectric hearings and alternative dispute proceedings. In 1986, he was promoted to assistant general counsel for electric and corporate regulation. Prior to this period, Miles was a trial attorney and later became a supervisory trial attorney. Over the last ten years, Miles became increasingly interested in alternative dispute resolution and is now an advocate for the resolution of disputes by means other than litigation. He has participated in many ADR and settlement proceedings as a facilitator or mediator, and as FERC's representative in an ADR mini-trial. He appears on panels discussing ADR and its use at the Commission and how it can be used elsewhere. He helps to screen cases for ADR application and convenes sessions with parties to initiate an ADR process. He works closely with other federal agencies in expanding the use of ADR and is a member of the federal government's ADR steering committee. Contact: (202) 208-0702 / Fax (202) 208-0006 / richard.miles@ferc.fed.us

Cheryl Miller is the wetlands and watersheds director of the Minnesota office of the National Audubon Society, in St. Paul, Minnesota. She has served with the National Audubon Society since 1991. She represents the Audubon on the Red River Basin Flood Damage Reduction work group, which successfully negotiated a flood damage reduction and natural resource enhancement agreement for the Red

River Basin in 1998. Miller specializes in habitat restoration in agricultural landscapes. She has an M.A. in public policy from the University of California and a B.A. in journalism from the University of Iowa. Contact: (651) 225-1830 / Fax (651) 225-4686 / cmiller@audubon.org

Don B. Miller is a senior staff attorney at the Native American Rights Fund (NARF) in Boulder, Colorado. He has represented tribal clients before the United States Supreme Court, federal appellate and district courts, the Court of Federal Claims, Congress, and federal agencies. His practice consists primarily of litigation and/or settlement of complex federal Indian law cases involving natural resources and usually attended by political/economic issues requiring Congressional and state legislative action. He has been lead counsel in a variety of matters, including possessory land claims, Congressional restoration of terminated tribes' trust relationship with the United States, water rights, hunting and fishing rights, voting rights, taxation, and FERC relicensing. In 1993, Congress enacted the Catawba Indian Tribe of South Carolina Land Claim Settlement Act, resolving that Tribe's claim against 63,000 defendants claiming title to a 144,000-acre treaty reservation. Currently, Miller represents the Nez Perce Tribe in Idaho's Snake River Basin adjudication where the Tribe asserts substantial instream flow water rights as a part of its federal treaty fishing rights. In 1989, he was selected by *Barrister*, the magazine of the Young Lawyer Division of the American Bar Association, as one of twenty young attorney's in the nation whose work is charged with excellence and makes a difference in our world. In 1974 Miller served briefly as an attorney advisor in the Interior Solicitor's Office, Division of Indian Affairs, in Washington, D.C. In 1972 he became the first director of the Organization of the Forgotten American, which provided legal, economic, consumer protection and health services to the Klamath Indians in Oregon. He received both his B.S. and J.D. from the University of Colorado. Contact: (303) 447-8760 / Fax (303) 443-7776 / miller@narf.org

Rebecca Mills is superintendent of Great Rasin National Park in Nevada. The park was established in 1986 from former U.S. Forest Service and national monument lands. The enabling legislation permitted grazing in perpetuity. In 1999 by mutual agreement of the three cattle grazing permittees, The Conservation Fund, and the park, cattle grazing was retired at the park, although sheep grazing continues. Mills is cosecretary of the White Pine County Coordinated Resource Management Steering Committee. She has a B.A. in history from Swarthmore College and a master's degree in community from the University of California at Berkeley. Mills has worked for the National Park Service for twenty-two years. Contact: (775) 234-7331 / Fax (775) 234-7269 / becky_mills@nps.gov

Robert F. Mills, Esq., is a member of the Mashpee Wampanoag Indian Tribe, former vice president of the Madhpee Wampanoag Indian Tribal Council 1971-1980, and is currently a partner at Wynn & Wynn, P.C. He earned a B.A. in speech communications and political science from Boston College and a J.D. from Boston College Law School. Contact: Fax (508) 775-1244

Susan Moodie joined the Udall Center for Studies in Public Policy at The University of Arizona in August of 1998. At the Center, Susan organizes trainings to support facilitation of public processes in Arizona, hosts the monthly CARMA meetings, and provides support for the Arizona Common Ground Roundtable. She has degrees in agriculture (Australia) and plant and soil and water science (Arizona) along with experiences as an organic market gardener, researcher of environmental issues in Malawi and of entomology in Arizona, permaculturalist, teacher, and urban forester. Early efforts with groups of rural and urban landowners led to the Landcare concept in Australia, now with some 4,500 voluntary groups. Landcare has spread to six other countries. Her interest in ecological restoration led her to pursue an interdisciplinary Ph.D. in arid lands at The University of Arizona to help her understand transformation at the individual, community, and institutional levels. Contact: (520) 319-9654 / Fax (520) 884-4702 / smoodie@juno.com

Bruce Moore recently accepted the position of the regional engineer at Reclamation's Lower Colorado regional office in Boulder City, Nevada. Prior to accepting the position in Boulder City, Moore held a similar position at Reclamation's office in Salt Lake City, Utah. From the fall of 1995 until the spring of 1999 he served as Reclamation's lead person for implementing the provisions of the record of decision for the operations of Glen Canyon Dam. A significant part of the lead person's responsibility was setting up and providing staff support to the designated federal official for the federal advisory committee known as the adaptive management work group. Moore has approximately twenty-six years of federal government

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Carl Moore, widely known for his work as a public policy and process facilitator, is a master of complex multi-party processes. In the past twenty-five years Moore has worked in thirty states and ten countries assisting communities and governments to design processes that facilitate both the revitalization of communities and the resolution of complex policy issues and conflicts. Moore is a professor emeritus at Kent State University and proprietor of The Community Store in Santa Fe, New Mexico. Contact: (505) 820-6826 / Fax (505) 820-6836 / cmoore16@juno.com

Christopher W. Moore, a partner of CDR Associates, is an internationally-known facilitator, mediator, and dispute systems designer. He has consulted with corporations, governmental agencies, and nongovernmental organizations on collaborative decision making and conflict management in over twenty-five countries in Africa, Asia, the Caribbean, Eastern and Western Europe, Latin America, the Middle East, and the Oceana-Pacific. In the United States, he has assisted many federal and state agencies involved in environmental and natural resource management issues to resolve a wide range of policy, regulatory, and site specific issues, and to design effective dispute resolution systems. Some of Moore's corporate conflict management clients include companies such as United Airlines, Canadian National, Sprint, U.S. West and Levi Straus and Company. Moore is also the author of *The Mediation Process: Practical Strategies for Resolving Conflict* (San Francisco, Ca: Jossey-Bass, Second Edition, 1996), and a number of other books and articles in the field of dispute resolution. Contact: (303) 442-7367 / Fax (303) 442-7442

Lucy Moore, a mediator, facilitator, trainer, and consultant, has worked with multi-issue, multi-party conflicts in the natural resource arena for the past eighteen years. Her clients are federal, state, local, and tribal governments and agencies as well as communities and special interest organizations. The issues include environmental protection, endangered species, remediation, surface water and groundwater quality, water rights, air emissions, toxic-waste facilities siting, dam operations, forest management, and more. With a strong background in Native American and southwest Hispanic issues, she brings a cross-cultural sensitivity to her work. After living eight years on the Navajo Indian Reservation, she served as Liaison for Indian Affairs under the Governor of New Mexico, and more recently she has worked with Hispanic communities in the Southwest. Moore regularly mentors those who might otherwise not have access to the ADR field, believing that the future health of the profession depends on its diversity and accessibility. Contact: (505) 820-2166 / Fax (505) 820-2191 / lucymoore@nets.com

Ann Moote is a senior research specialist at the Udall Center for Studies in Public Policy at The University of Arizona. She holds a B.S. in geography from McGill University, a M.S. in renewable natural resource studies from The University of Arizona, and she is a trained mediator and facilitator. Moote's research focuses on natural resources policy and planning, public participation processes, and community-based conservation efforts. She was project manager of the U.S. public input process for the Commission of Environmental Cooperation's San Pedro River Initiative and currently manages the Udall Center's Dialogue San Pedro project. Ann is the author of *The Partnership Handbook*, a resource and guidebook for community-based partnership groups addressing natural resource, land use or environmental issues (available on the Web at <ag.arizona.edu/partners/>), *The Politics of Ecosystem Management* (with Hanna J. Cortner, published by Island Press), and several journal articles and professional reports. Moote is the editor of the Communities Committee of the Seventh American Forest Congress' newsletter, *Communities and Forests*. Contact: (520) 884-4393 / Fax (520) 884-4702 / moote@u.arizona,edu

Dennis Moroney owns and operates the Cross U Ranch near Prescott, Arizona, with his wife and two children. They have operated the ranch using the principles of collaborative holistic management for the past eight years and helped to found the Santa Maria Mountains Group to provide a means to set shared goals for the land, make management decisions, and monitor results. Moroney is also a founding member of the Arizona Common Ground Roundtable, working at the policy level as well as in his community on issues related to the preservation of open space, wildlife habitat, and to establish common ground between ranchers and environmentalists. He was recognized as the 1999 Wildlife Habitat Steward by the

Arizona Game and Fish Commission. Raised and educated in Arizona, Moroney taught high school agriculture, horticulture, forestry, and natural resources in Washington State before returning to Arizona to ranch. He is currently an adjunct faculty member at Prescott College and Yavapai College, and is an experienced facilitator of multi-stakeholder, participatory processes. Contact: (520) 308-0494 / Fax (520) 778-7086 / crossu@primenet.com

Lee Nellis is a planner-in-residence in Sonoita, Arizona, where he is assisting the Sonoita Crossroads Community Forum with a regional planning initiative. He is also director of land use policy for the Sonoran Institute. Mr. Nellis is active in the Institute's efforts to improve growth management in Arizona and rural counties throughout the West. Prior to joining the Institute, he had a consulting practice that specialized in working with rural communities throughout the West. He has prepared comprehensive plans, major planning studies, and land use regulations for cities and counties in Colorado, Idaho, Montana, Nebraska, Utah, and Washington. In 1990, Mr. Nellis was named Planner of the Year by Western Planning Resources. He is a graduate of the University of Wyoming and holds a master's degree in land use policy from the University of Wisconsin. Contact: (520) 290-0828 / Fax (520) 290-0969 / losencinos@theriver.com

Marcia Newlands' practice focuses on environmental, energy, and natural resource law and related litigation. Ms. Newlands' practice includes hazardous and solid waste management and disposal issues, hazardous waste cleanups and related litigation, environmental permitting, water rights and water pollution issues, municipal utilities, and energy and land use. Her work in these areas includes negotiation, litigation, and legislation. She chairs the Association of Washington Business (AWB) MTCA task force. She is the author of the water rights chapter of the two-volume *Environmental Law and Practice*, 1997, of the Washington Practice Series by the West Group. She attended Pomona College (B.A., 1968) and the University of Texas School of Law (J.D., 1986). Contact: (206) 389-6102 / Fax (206) 447-0849 / mnewlands@hewm.com

Jim Norris is natural resources advisor for the Trent-Severn Waterway, a Canadian federal agency. The Waterway is a national historic site providing navigation between Georgian Bay of Lake Huron and the Bay of Quinte of Lake Ontario. Mr. Norris has nearly twenty years professional experience as a biologist and resource manager, and is known for his innovative approaches to managing stakeholder relationships. In the past few years he has been focusing his efforts on fostering collaborative alliances with stakeholders, including First Nation communities, federal and provincial agencies, local municipalities, community and environmental groups, educational institutions, and businesses. He served as the catalyst for several relatively large collaborative resource management initiatives on ecosystem management and on specific issues such as shoreline renaturalization, fish habitat inventories, and water resource monitoring. These collaborative processes are bringing together a broad range of stakeholders at all levels to design and implement joint resource management actions to protect valued environmental and cultural resources. Mr. Norris has published papers and made presentations at international symposia. Contact: (705) 750-4941 / Fax (705) 742-9644 / jim_norris@pch.gc.ca

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Rosemary O'Leary is professor of public administration at the Maxwell Graduate School of Citizenship and Public Affairs at Syracuse University. An elected member of the U.S. National Academy of Public Administration, she was recently a senior Fulbright scholar conducting research on environmental policy in Malaysia. Previously she was professor of public and environmental affairs at Indiana University, and codirector of the Indiana Conflict Resolution Institute. O'Leary has served as the director of policy and planning for a state environmental agency, and has worked as an environmental attorney. She has worked as a consultant to the U.S. Department of the Interior, the U.S. Environmental Protection Agency, the Indiana Department of Environmental Management, the International City/County Management Association, the National Science Foundation, and the National Academy of Sciences. She is the author of three books and more than sixty articles on environmental management, environmental policy, public management, dispute resolution, bureaucratic politics, and law and public policy. She has won five national research awards, including the Mosher Award, which she won twice, for best article by an academician published in *Public Administration Review*. She has won seven teaching awards as well, including the national Excellence in Teaching Award given by the National Association of Schools of Public Affairs and Administration, and she was the recipient of the Distinguished Service Award given by the American Society for Public Administration's Section on Environment and Natural Resources Administration. She has served as chair of the Public Administration Section of the American Political Science Association and as the chair of the Section on Environment and Natural Resources Administration of the American Society for Public Administration. She holds a Ph.D. in public administration from Syracuse University and a J.D./M.P.A. from the University of Kansas.

Suzanne Orenstein is a mediator with over twenty years experience and expertise in environmental, land use, public policy, and other interorganizational dispute resolution. For twelve years she worked with RESOLVE, a center for environmental dispute resolution based in Washington, .D.C; for four of those years she served as vice president. At RESOLVE she mediated processes with national, state, regional and local interests. Her projects included a Presidential Commission on global warming, a federal/state regulatory negotiation concerning the transport of hazardous waste, a policy dialogue on pesticide effects on birds, and several toxic waste cleanups. She has also mediated resolution of controversies over locally unwanted facilities, including mines and urban in-fill development. She has facilitated strategic planning processes and contentious meetings concerning forestry management, fisheries, water quality, and estuarine and watershed improvements. She is known for improving communication among parties with disparate negotiation practices, including tribes, neighborhood groups, and international NGO's. Prior to her work with RESOLVE, she was the alternative dispute resolution coordinator for the Massachusetts Attorney General and she was on the faculty for the University of Massachusetts Graduate Program in Dispute Resolution. Contact: (978) 922-1841 / Fax (978) 927-6225 / suzoren@aol.com

Wilson Orr is the director of the Sustainability and Global Change Program at Prescott College. Orr is experienced in local community development, emergency services, environmental education, and technical project management. Prior to joining the faculty at Prescott College he spent ten years in local government management positions with the cities of Tucson and Scottsdale, where he managed new initiatives in sustainable community development and advanced technology applications. In addition to an M.B.A., he holds undergraduate degrees in physics and electrical engineering. Contact: (520) 717-6070 / Fax (520) 717-6073 / worr@prescott.edu

Donald L. Patterson is the chairman of the Tonkawa Tribe of Oklahoma. Prior to becoming chairman of the tribe four years ago, he served for two terms as the tribal vice chairman and two terms as the tribal secretary. He has been a leader in Native American affairs his entire adult life, having first become active during the Alcatraz Occupation in 1969. Chairman Patterson advocated a solution that made business sense for the tribes involved in the Chilocco Indian school dispute. He was a moving force on the panel of

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Jean Clarke Schwennesen holds a master's in landscape architecture. She and her husband purchased their ranch on the San Pedro River in Arizona with the help of a Nature Conservancy/Bureau of Land Management Conservation easement. This easement was one of the "wins" arising from a Coordinated Resource Management Group that was considered by most participants a three-year waste of time. Schwennesen and her husband lived and worked in Africa for four years and Pakistan for one year prior to their ranch purchase. Her husband continues to consult in Africa on natural resource management. They are currently constructing a straw bale house, a community project and alternative dispute resolution case study in its own right. Contact: (520) 357-6515 / Fax (520) 357-6515

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