



Ecosystem management integrates scientific knowledge of ecological relationships within a complex sociopolitical and values framework toward the general goal of protecting native ecosystem integrity over the long term.¹⁰³

2. *The central principles underlying Alternative Dispute Resolution approaches are critical to effective implementation of ecosystem management.*

Most descriptions of ecosystem management highlight the importance of collaborative decisionmaking and shared responsibility. Since ecosystems cross political and administrative boundaries, ecosystem management implies interagency and intergovernmental approaches. Since it affects large spatial areas, the concurrence and involvement of numerous stakeholders is required. A report of the President's Commission on Environmental Quality noted that "Collaboration with other organizations, including other landowners, is important to the success of biodiversity initiatives."¹⁰⁴ One of the Forest Service's ecosystem strategic plan elements is "public involvement, communications, and partnerships."¹⁰⁵

Professor Scott Slocombe of the Wilfrid Laurier University in Ontario points out that "through a series of workshops and other consultations ... [ecosystem management] needs to collect, organize, and present a range of information in diverse forms accessible to many different people. It needs to facilitate development of consensus on goals and objectives and provide for ongoing evaluation and feedback on management actions."¹⁰⁶ One effort at ecosystem-level planning, the Great Lakes Remedial Action Plan, has been praised for "offer[ing] a unique opportunity to break down institutional barriers at a practical level. All affected organizations, agencies and communities must work together on common goals and objectives, explicitly accounting for interrelationships between ecosystem components."¹⁰⁷

Agee and Johnson, authors of *Ecosystem Management for Parks and Wilderness*, assert that an important strategy in ecosystem management is to achieve "Consensus among affected parties on the specific indicators of desired conditions, benefits, minimum acceptable standards, or constraints to activities."¹⁰⁸ These authors point out several challenges to successful ecosystem management that imply the need to include alternative dispute resolution concepts:

¹⁰³R. Edward Grumbine, "What is Ecosystem Management?" 8 *Conservation Biology* 1, March 1994, p31.

¹⁰⁴President's Commission on Environmental Quality, *Partnerships to Progress* (Washington, D.C.: 1993), p. 7.

¹⁰⁵Thomas M. Quigley and Stephen E. McDonald, "Ecosystem Management in the Forest Service: Linkage to Endangered Species Management," 10 *Endangered Species Update* 3-4 (1993).

¹⁰⁶D. Scott Slocombe, "Implementing Ecosystem-Based Management," 43 *BioScience* 9:620 (1993).

¹⁰⁷J. J. Hartig, and J.R. Valentine, "Use of an Ecosystem Approach to Restore Degraded Areas of the Great Lakes," 18 *Ambio* 425 (1989).

¹⁰⁸J.K. Agee and D.R. Johnson, *Ecosystem Management for Parks and Wilderness* (Seattle, WA: University of Washington Press, 1988), p. 230.



- Finding common ground between agencies, their employees, and the public to establish unambiguous common goals;
- Establishing a good foundation of baseline information on resources and people involved;
- Overcoming a lack of understanding by each of the significant publics (external and internal) of values and purposes of ecosystem management;
- [Securing] expertise in conflict resolution.

Developing proactive decisionmaking and management processes, such as those implied by ecosystem management, means broadening our view of ADR, so that we capture more of its benefits before situations become as polarized. Looking broadly at collaborative interactions in the public realm, each is structured with a specific objective in mind which differs across situations. In some, it is to foster communication or build bridges between groups that have been traditionally aligned. In others, it is to build knowledge or gather information. In some, groups meet to solve a common problem, while in others, they meet to resolve a specific dispute. Some activities are directed at planning a future, and others at coordinating the efforts of various organizations. Some establish policies, while others intend to build political support for a specific direction. As traditionally conceived, formal ADR fits only one of these objectives: resolving disputes. Yet the essence of each of these interactions is the same. They share the fundamental principle that a public choice must be made and that it is most effectively made in a collaborative manner that differs from traditional administrative practice.

The principles underlying ADR can be applied to many more situations than those evidencing high levels of current conflict. In the traditional view, ecosystem management might not be amenable to ADR because the conflicts inherent in management choices might not be ripe for settlement. In the endangered species realm, to wait for disputes to fester will continue to yield intractable conflicts and policy impasses. The principles underlying the practice of ADR can be employed as elements of good administrative process. These include:

- Fostering an understanding of interests, needs and concerns, so that choices can be constructed that are more accurate, comprehensive, and accommodating;
- Fostering trust, so that bridges are constructed that can facilitate understanding and ease implementation;
- Ensuring representation of affected interests, so that no interest is overlooked and more appropriate and effective choices are made;
- Providing opportunities for joint learning, so that existing knowledge is shared, new knowledge is generated, and more informed decisions are made;



Efforts to manage at the ecosystem scale must employ these principles of administrative practice or else they will not succeed. At the same time, by developing more proactive decisionmaking processes, some of the problems involved with institutionalizing negotiation and collaborative problem-solving in the endangered species realm are lessened. Table 2 compares the use of ADR principles in the implementation of the ESA and the creation of ecosystem management approaches. The incentives provided to stakeholders are more likely to achieve effective protection, the opportunities for involving stakeholders and exploring a wide range of issues are more expansive, and there is a greater chance that processes can be structured that will yield more stable solutions.

3. *Some of the early experience with ecosystem management makes it clear that an ecosystem approach can yield benefits, and that collaboration among diverse interests is critical to successful management.*

There are numerous, ongoing examples of ecosystem management at varying levels of scope and formality. The experience with these situations illustrates how the application of ADR principles can promote problem-solving and management in this context. Each of these situations involves specific attempts to collaboratively explore the needs and dynamics of an ecosystem and the implications of this understanding for on-the-ground management activities. Many of these situations represent attempts to coordinate activities across different state and federal agency boundaries as well as to share information and conduct joint research in order to expand the base of common knowledge about the functioning of a specific ecosystem. Each represents an attempt to view a unit of public land as part of a larger ecosystem that contains other public and private lands, as well as multiple social values that need to be understood and accommodated.

These efforts have varied in terms of scope and number of collaborators. However, each applies the precepts of ADR that building trusting relationships, sharing information and concerns, and jointly undertaking fact-finding and evaluation will set the stage for solving mutual problems. Many of the final tests regarding the wisdom and stability of agreements that result from these processes cannot yet be made. However, because these processes are proactive in nature, rather than reactive as in most endangered species cases, and because many have been initiated by the stakeholders themselves, those involved express optimism about where the processes will lead.

For example, the Applegate Partnership (Case #11) grew out of the frustrations of several individuals with the polarization of resource management in this Oregon watershed. What happened when the traditional adversaries began talking among themselves was they discovered fairly quickly that there was considerable overlap between the desires and interests of the industry, environmental and community groups.



Table 2: Comparing the Use of ADR in ESA Enforcement and Ecosystem Management

Issue	ESA	Ecosystem Management
Nature of Conflicts	Endangered species conflicts often appear and are zero sum; not clear win-win solutions are common.	Ideally, ecosystem management should be proactive and take place before there is no slack in the system: before conflicts are polarized and highly visible. At the ecosystem level, more options and opportunities for win-win solutions are usually present.
Incentives for the parties	The ESA's mandate is absolute and nonnegotiable. Legitimizing formal negotiation would weaken this mandate.	No formal mandate currently exists for ecosystem management. Current laws create few incentives for stakeholders to seek cooperative solutions to ecosystem problems. Traditional bureaucratic territorialism and public mistrust inhibit cooperation. Instituting collaborative negotiations as a part of ecosystem management will tend to promote activity, not constrain ongoing activities.
Stakeholder involvement	For effective ADR, all affected parties should be involved at the outset, but the ESA process does not provide a means for all affected parties to be involved.	The ideal of ecosystem management is that all parties should be involved early on. However, absent some mandate for maintaining ecosystem integrity, granting all stakeholders full decisionmaking power from the outset could lead to a loss of essential ecosystems or ecosystem attributes.
Issue scoping	The FWS and NMFS (and the courts) view the ESA framework as a permitting process and not a broader planning or dispute resolution process. Scoping of issues is limited.	Ecosystem management ideally puts all issues on the table. As a result, it allows for a focus on solving underlying problems, and facilitates tradeoffs between groups on different issues.
Parallel avenues for intervention	Parallel avenues for intervention are hard to close off in endangered species-development disputes. Moving to other arenas occurs in part because groups strategically shift channels for action, and in part because underlying issues are not resolved.	Numerous parallel avenues for intervention exist under the current legal scheme for ecosystem management. Coordination of mandates will be necessary. Effective representation of affected interests is necessary to avoid dissension resulting from failure to resolve underlying conflicts. Ecosystem management provides an opportunity for underlying disputes to be resolved because (in theory) all relevant issues are put on the table.
Finality and ability to enforce	ESA process provides few opportunities and resources for monitoring effectiveness of implementation, let alone evaluating the effectiveness of decisionmaking.	Monitoring of effectiveness is a key component of ecosystem management. It requires that strategies and goals remain adaptive; thus resolutions reached through collaborative problem-solving are not "final." While lack of finality can pose a problem, it can be addressed by establishing trust among parties, and creating mechanisms for ongoing evaluation and renegotiation based on monitoring results.



Their conversations have grown into a "community-based project involving industry, conservation groups, natural resource agencies, and residents cooperating to encourage and facilitate the use of natural resource principles that promote ecosystem health and diversity. Through community involvement and education, this partnership supports management of all land within the watershed in a manner that sustains natural resources and that will, in turn, contribute to economic and community stability within the Applegate valley."¹⁰⁹ According to a Forest Service participant in the partnership, "this is not a project in the sense that it has an end;" it is a process aimed at building productive working relationships so that people and groups will be able to effectively participate in natural resource management decisions and projects in this area.

The Negrito Ecosystem Project (Case #12) in New Mexico is another example of ADR principles applied to the ecosystem management context. This process was initiated by a small conservation group, and then adopted by the Forest Service, to develop an effective, ongoing system for managing the 130,000 acre Negrito watershed in the Gila National Forest. It involves a small core group of individuals representing the agency, timber and grazing interests, and environmental groups, as well as a larger, informal working group of 24 people from a diverse set of backgrounds and interests. Those involved are committed to a consensus approach to decision-making. They recognized, at the outset, that despite their differences, they shared a major underlying objective of seeing a healthy social and biological ecosystem in their community. According to the Forest Service participant in this effort, this process is significantly different from how such management decisions are usually conceived and made. He says it has been a "holistic, ecologically-based ecosystem project" from its inception, not just a "retreaded traditional project."

4. *Ecosystem management is a major strategy underlying current agency reinvention efforts, and can take place under existing statutory authority.*

An ecosystem approach to conservation is one of the major themes of recent Administration efforts to reform government, building on the vision that President Clinton created in the Forest Conference in Portland, Oregon in April, 1993 of consensus-based, ecosystem-level, multi-party decisionmaking. Published in September, 1993, the National Performance Review (NPR) reiterated these themes and recommended that the President "issue a directive to establish ecosystem management policies across the government,"¹¹⁰ and began a series of Executive branch activities aimed at incorporating an ecosystem approach into resource management. The NPR recommendation noted that the White House Office on Environmental Policy had already convened an interagency task force of appropriate assistant secretaries to develop and implement cross-agency ecosystem management projects. The recommendation also

¹⁰⁹Applegate Partnership, "Vision Statement" (1993).

¹¹⁰Vice President Al Gore, From Red Tape to Results: Creating a Government that Works Better & Costs Less, Report of the National Performance Review (Washington, D.C.: Government Printing Office), September 1993, p. 52.



noted that the task force was to establish cross-agency teams to develop initial ecosystem management plans for implementation in fiscal year 1995. In addition, it was recommended that the President issue a directive declaring "sustainable ecosystem management across the federal government" in 1994. Accompanying the NPR recommendation was a report on reinventing environmental management in which one of four recommendations aimed at fostering cross-agency ecosystem-level planning and management.¹¹¹

From the NPR recommendation has blossomed a network of interagency workgroups, subgroups and survey teams.¹¹² Subgroups are focusing on issues relating to budget process, legal authorities, institutional issues, science and information management, public participation, and policy. The Legal Authorities group is looking at both cross-cutting statutes (such as FACA, the ESA, and the National Environmental Policy Act), and statutory authorities and requirements applicable to a single agency (such as organic acts, the National Forest Management Act, etc.), to uncover barriers and opportunities for agencies to undertake ecosystem management. The Institutional Issues group is covering issues such as organizational culture, internal regulations, employee performance criteria, and the shortage of personnel with appropriate expertise. The Science and Information group is addressing issues such as research, monitoring, assessment and information management. The Public Participation group is looking at issues such as how, when and to what degree stakeholders should become involved in the ecosystem management process. The Policy subgroup is looking at existing and/or proposed agency policies on ecosystem management to see if they are compatible. Each issue group is looking at the opportunities for and barriers to ecosystem management in the areas of interagency coordination, collaboration with non-Federal entities and the public, and reaching ecologic and economic goals.

Six survey teams have been created to examine or expand ongoing ecosystem management efforts on the ground: the Anacostia River Watershed, the Great Lakes, Coastal Louisiana Wetlands, Southern Appalachian Highlands, Pacific Northwest Forests, Prince William Sound. These teams are visiting the ecosystems and pursuing two basic questions: 1) What can we learn from the experiences of these ecosystem management efforts? and 2) What can the Task Force do to support efforts in the field and facilitate more effective ecosystem management in the future? Three additional sites -- the West Mojave Desert, Monterey Bay, and the Great Plains -- have been designated as laboratories where there is promise for ecosystem management that has yet to be substantially realized. The current plan is for the subgroups and teams to report to the task force and the Vice President in October, and the report may or may not lead to the preparation of an Executive Order.

¹¹¹Vice President Al Gore, From Red Tape to Results: Creating a Government that Works Better & Costs Less: Reinventing Environmental Management, Accompanying Report of the National Performance Review, (Washington, D.C.: Government Printing Office), September 1993, p. 11-15.

¹¹²The organization of Administration task forces was summarized in recent testimony by James Tipkin, Co-Chair of the Interagency Working Group on Ecosystem Management, at a joint hearing before the U.S. House of Representatives Committees on Natural Resources, Merchant Marine and Fisheries, and Agriculture (Subcommittee on Specialty Crops and Natural Resources), September 20, 1994.



Other activities signal the importance of ecosystem management as an organizing principle of federal resource management. An informal group called the Interagency Ecosystem Management Coordination Group has been established with seventeen agencies as members. The Congressional Research Service issued a report in April, 1994, entitled "Ecosystem Management: Federal Agency Activities," following a symposium on ecosystem management conducted in late March which CRS convened in response to requests from six Congressional committees.¹¹³ The Majority Staff of the House Committee on Natural Resources submitted a report to the Committee on April 30, 1994, entitled "Ecosystem Management: Sustaining the Nation's Natural Resources Trust."¹¹⁴

While the exact form of future resource management policies remains unclear, it seems quite likely that the ideas underlying ecosystem management will be central themes. There is ample authority in existing law for agencies to shift to an ecosystem-based approach to conservation. The ESA provides several opportunities for the FWS to engage in ecosystem management. Its purposes section states, "The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved."¹¹⁵ The consultation regulations require federal agencies to consider "the direct and indirect effects of [their] action[s] on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action. ..."¹¹⁶ The requirement to designate and protect critical habitat also can be seen as promoting ecosystem-level management and protection.

While much of the ESA focuses on a single species and single project approach, section 10 does promote habitat-level planning by permitting incidental take if a habitat conservation plan is approved. In several instances, this provision has been used to establish regional habitat conservation plans, which come close to ecosystem-level management. According to Professor Timothy Beatley, most regional HCPs:

involve the appointment of a steering committee to oversee the preparation of the plan, usually comprised of representatives of the major stakeholder groups in the community or region (e.g., developers, environmentalists, local officials, representatives of federal and state resource management agencies). The committee is frequently chaired by a more neutral party, such as The Nature Conservancy (TNC).¹¹⁷

¹¹³Wayne A. Morrissey et al, Ecosystem Management: Federal Agency Activities (Washington, D.C.: Congressional Research Service, The Library of Congress, April 19, 1994), CRS Report #94-339 ENR..

¹¹⁴U.S. House of Representatives, Committee on Natural Resources, Ecosystem Management: Sustaining the Nation's Natural Resources Trust (Washington, D.C.: Govt Printing Office, April 1994), Majority Staff Report, Committee Print No. 6.

¹¹⁵16 U.S.C.A. 1531.

¹¹⁶50 C.F.R. 402.02 (1993).

¹¹⁷Timothy Beatley, Habitat Conservation Planning: Endangered Species and Urban Growth (Austin TX: University of Texas Press, 1994), p.20.



A second opportunity for multi-species and multi-project planning under the ESA is provided by section 4(d), which allows the Secretary of the Interior to allow incidental takings if occurring under an approved state species-protection program. Under 4(d), Secretary of the Interior Bruce Babbitt recently issued a rule which "listed the California gnatcatcher as threatened rather than endangered, designates no critical habitat, and allows incidental takings of the bird for activities in accordance with ..." the California Natural Communities Conservation Program.¹¹⁸ The FWS may also link grants to states for endangered species programs to a requirement that states incorporate ecosystem management principles into their endangered species programs.

In July, 1994, the FWS and NMFS recognized the potential for incorporating an ecosystem approach into endangered species policy and gave notice of several proposed changes in the implementation regulations for the ESA, including: grouping listing decisions on an ecosystem basis when possible, and conducting status reviews in partnership with other public or private agencies across the entire range of a candidate species; developing cooperative approaches to restore species populations; developing recovery plans at an ecosystem level including the participation by a wide range of affected parties; and promoting cooperative efforts across landscapes in a variety of ways.¹¹⁹

The federal development agencies, particularly the FS and the BLM, can also engage in ecosystem management under existing laws. As noted above, NFMA and its implementing regulations contain a mandate for the protection of biodiversity on FS lands. The act and associated regulations require that forest planning provide for diversity of plant and animal communities, that viable populations of vertebrate species be maintained, and that effects of management on populations of indicator species be monitored.¹²⁰ While evaluation by commentators and treatment by the courts of this mandate has varied substantially, it has been acknowledged and utilized as a means to protect ecosystems, and praised for placing ecological concerns on par with other multiple-objectives.¹²¹ In addition, resource management plans required under NFMA and FLPMA must be prepared in accordance with the indirect effects, multidisciplinary planning, and interagency consultation requirements contained in NEPA.

There are several other opportunities for federal agencies to adopt ecosystem management. It can be argued that some agencies managing federal reserves, including the National Park Service and all agencies managing Congressionally-designated

¹¹⁸A. Dan Tarlock, "Local Government Protection of Biodiversity: What is its Niche?" 60 University of Chicago Law Review 555 (1993).

¹¹⁹59 Fed. Reg. 34273, July 1, 1994.

¹²⁰16 U.S.C. s 1604(g)(3)(B) (1988); 36 C.F.R. 219.19 (1992); see also, Sierra Club v. Marita, 1994 WL 74368, *5 (E.D. Wis.).

¹²¹See Alyson C. Flourmoy, "Beyond the 'Spotted Owl Problem': Learning from the Old-Growth Controversy," 17 Harvard Environmental Law Review 302 (1993); Sierra Club v. Espy, 822 F.Supp. 356, 362 (E.D. Texas 1993), rev. on other grounds, 18 F.3d 1202 (5th Cir. 1994); SAS v. Moseley, 798 F.Supp. 1484, 1489 (W.D. Wash).



wilderness, have authority to place regulation limitations on private lands adjoining federal lands.¹²² Such authority may be used to manage at an ecosystem level. Several other statutes relating to the protection of ecologically sensitive areas may be used for ecosystem management, including the Wild and Scenic Rivers Act, the Coastal Zone Management Act, and acts providing for the protection of coastal barriers and timber. Federal agencies can utilize the mandates in these acts to target important areas for ecosystem management, and create incentives for states to incorporate ecosystem management principles in their resource management programs.

Several pollution control laws also enable EPA to engage in ecosystem management. For example, under the Clean Water Act, EPA can consider ecosystem interactions by applying an indirect and cumulative effects analysis when establishing programs and approving permits. In addition, under the Clean Air Act, some pristine federal reserve areas are protected from distant polluters, and localities can be forced to engage in ecosystem-level planning under the congestion management and transportation control plan provisions.

While no one knows what will happen over the long term with ecosystem management policy -- whether an executive order will be issued or Congress generates new legislation -- ecosystem management initiatives are underway and are becoming de facto federal policy. Besides the national level working groups discussed above, interagency ecosystem management working groups have been established in several areas of the country. For example, such a workgroup has been formed in the Midwest, consisting of representatives from nine federal agencies, and five state natural resource departments.¹²³

Policy guidance has been established by FS and FWS leaders that moves their agencies toward ecosystem management. The Forest Service clearly is pinning its future on an ecosystem approach to forest management. Chief Jack Ward Thomas issued a national "Action Plan for Implementing Ecosystem Management" in February 1994 with the following four goals:

1. Adopt an ecosystem management approach throughout the agency;
2. Integrate ecosystem management into all activities;
3. Strengthen collaboration and innovation; and

¹²²See Robert B. Keiter, "The Old Faithful Protection Act: Congress, National Park Ecosystems, and Private Property Rights," 14 Public Land Law Review 21 (1993) and Robert B. Keiter, "Symposium: 'A New Era for the Western Public Lands': Beyond the Boundary Line: Constructing a Law of Ecosystem Management," 65 University of Colorado Law Review 293, 305 (1994).

¹²³Memorandum from EPA Region 5 to Interagency Cooperation on Ecosystem Management Workgroup Leaders and Members, April 14, 1993.



4. Ensure our management actions are ecologically responsible, economically viable, and socially acceptable.¹²⁴

Agency leaders also see the regional-scale planning underway in the adaptive management areas designated as part of the spotted owl compromise in Oregon and Washington as the crucible that will forge ecosystem management in practice.

Similarly, FWS leaders have adopted an ecosystem approach as a major philosophy for Service activities. In March, a memo was sent to all FWS employees and signed by the Washington D.C. and Regional leadership, which declared "we believe an ecosystem approach will help us meet these challenges and we have adopted this concept as an underlying philosophy and implementation framework through the Service."¹²⁵ In the FWS view, "an ecosystem approach to fish and wildlife conservation means protecting or restoring the function, structure, and species composition of an ecosystem while providing for its sustainable socioeconomic use."¹²⁶ They established 52 watershed-based ecosystem units on which planning and action was to take place in cooperation with public and private partners.

Other agencies and programs have at least rhetorically embraced the concept of regional scale planning and analysis, and by collecting information on a larger scale, the National Biological Survey will tend to encourage a definition of problem and planning units at a larger scale. While it is too soon to tell whether these policy and management shifts will bear fruit and survive changes in political leaders, it is likely that enough activity is underway to sustain itself. And because a wide spectrum of political interests have endorsed the concept (from ecologists to commodities interests), the ecosystem management concept will continue to have a life in political arenas even if its proponents differ considerably on what it means.

5. *The multiparty, collaborative problem-solving needed in ecosystem management is at odds with traditional administrative practice.*

While ecosystem management makes sense on a number of levels, its implementation is problematic. Some of its defining characteristics conflict with traditional administrative practice. As summarized in Table 3, these characteristics include:

A concern with cross-jurisdictional problem-solving and management --
Ecosystems rarely coincide with political or administrative boundaries, and

¹²⁴Jack Ward Thomas, Chief, USDA-FS, "Concerning Implementation of Ecosystem Management Strategies," Statement before the Subcommittee on Agricultural Research, Conservation, Forestry, and General Legislation, Committee on Agriculture, U.S. Senate, April 14, 1994.

¹²⁵Memo from FWS Directorate to All Service Employees, "Ecosystem Approach to Fish and Wildlife Conservation," March 8, 1994.

¹²⁶U.S. Fish and Wildlife Service, "An Ecosystem Approach to Fish and Wildlife Conservation: An Approach to More Effectively Conserve the Nation's Biodiversity," March 1994.



generally cover large spatial areas. Ecosystems also interact with each other; rarely are they self-contained islands. Hence, management requires looking outward from the ecosystem in question, so that important processes (such as nutrient transfer) are understood and key stresses (such as air-borne contaminant deposition) are identified and dealt with. Effective management requires the participation of numerous administrative and political participants. As a result, ecosystem management raises questions about how to encourage federal agencies to work with one another, how different levels of government can and should interact (federal-state, federal-local, etc), and how the public sector should relate to private sector interests (both nonprofit and for-profit).

A focus on issues and concerns that often cut across traditional interests -- Ecosystem management is a process of regional resource-based planning. As a result, it requires the participation of a host of interests, some of which may not have been involved in federal decision-making before.

An attention to problem-solving that is multi-disciplinary -- Since ecosystem management explicitly recognizes the concurrent objectives of economic and environmental sustainability, it requires decisionmakers to employ a variety of social and natural science concepts and methods.

Consideration of long time frames -- Ecosystems are dynamic entities, changing over long periods of time; hence, ecosystem management involves analysis and decisions which consider past conditions and attempt to influence long term future direction. To determine a baseline for defining "ecosystem integrity," natural scientists must consider ecosystem conditions that existed before human settlement, including historic disturbance patterns. Since ecosystem processes develop over long time periods, management plans involve thinking well into the future.

An explicit focus on uncertainty in decisionmaking: Concepts of ecosystem management include an explicit focus on what we do not know. Two key strategies for dealing with uncertainty are risk assessment -- defining probabilities for the occurrence of different events -- and adaptive management -- using an ongoing monitoring scheme that leads to reevaluation and changed strategies.

Unfortunately, many of these defining characteristics of ecosystem management conflict with the norms, traditions, and policies underlying "normal" administrative decisionmaking. Table 3 relates characteristics to the administrative problems they create. Agencies seek to protect their jurisdictions and turf, attempt to maintain control over their own agendas, and foster and protect their own organizational cultures. Activities that force them to cooperate or coordinate with other agencies are inherently problematic. They may require a sharing of resources, deference in decisionmaking, or they may result in disparate organizational cultures coming into conflict. Often, they imply a loss of control, as information, responsibility and power are shared.



Table 3: Administrative Difficulties Associated with Implementing Ecosystem Management

Ecosystem Management Characteristic	Administrative Problems
Cross-Jurisdictional Problem-Solving and Management	<ul style="list-style-type: none"> • Violates agency norms relating to jurisdiction, control, and culture. • Difficult to make interagency work groups work effectively.
Focus on Issues and Concerns that Cut Across Interests	<ul style="list-style-type: none"> • May affect longstanding political relationships between agencies, constituents, and legislators. • May create a large amount of conflict that takes time and energy to resolve. • Ability to create flexible multiparty work groups is constrained by the Federal Advisory Committee Act.
Multidisciplinary Problem-Solving	<ul style="list-style-type: none"> • Violates agency norms about appropriate expertise. • Agencies often lack needed expertise.
Long Time Frames	<ul style="list-style-type: none"> • Conflicts with traditional policy incentives to focus on short term problems and solutions • Requires the construction of long term relationships between agencies and others. • Ability to commit to long term management strategies is constrained by short term federal budgetary processes.
Explicit Focus on Decision-Making Uncertainty	<ul style="list-style-type: none"> • Risk-assessment approach tends to clarify decisionmaking assumptions in a way that can challenge agency sense of professionalism, and can open decisions to challenge. • Adaptive management approach requires ongoing investments in monitoring and reevaluation, and requires a period rethinking of decisions that can be problematic.



Tasks that are cross-jurisdictional and cross-interest may also cause political problems, as agencies with consistent constituent and legislative relationships may be forced to deal with other groups and interests. At minimum, such interaction takes a lot of time and energy. In addition, it has the potential for shaking up the stability and predictability that comes from stable political relationships.

Ecosystem management requires administrative behavior that traditionally has been difficult to achieve. One of the primary instruments for accomplishing management on a regional scale is a variety of interagency working groups, and such groups have a checkered history. It has been difficult to organize and facilitate them, creative incentives for members to take them seriously, and maintain them as effective implementers over time. Generally for such groups to be effective, higher level leaders have had to take an active interest in their activities, and this requires a commitment of scarce time.

The kind of public-private interaction required by ecosystem management also can be problematic. It can challenge the concept of professionalism held by many agency analysts and decisionmakers, as it suggests the need for shared responsibility in decisionmaking and implementation which may conflict with traditional top-down notions of administrative decisionmaking. In addition, certain kinds of public-private interaction can lead to undue influence by certain private parties on federal decisionmaking. Because of this potential, public-private interaction is regulated by federal law and norms of behavior, which also can be problematic. For example, the Federal Advisory Committee Act mandates a set of procedural safeguards in the way that nongovernmental advisory groups are established and operate, and these safeguards have become barriers to the development of multiparty working groups as are needed in regional-scale planning and management. Having been successfully challenged on FACA grounds on their old growth management plan for the Pacific Northwest forests (the Forest Ecosystem Management Assessment Team process),¹²⁷ the U.S. Forest Service is currently highly concerned about including nongovernmental groups in decisionmaking, even though they recognize an increasing need to build understanding and partnerships across larger regions.

While a few agencies like the U.S. Forest Service have been employing interdisciplinary teams in planning for many years, most agencies have a strong concentration in specific areas of expertise that traditionally have been seen as appropriate to dealing with a set of issues. As ecosystem management develops, there is a strong need to expand the perception as to what is appropriate expertise in planning and management and this will challenge some traditional concepts of professionalism. For example, the FWS is deep in species-level wildlife and fisheries managers, and thin in ecosystem-level scientists. The species-orientation of their staff may well be a barrier to

¹²⁷While the court decided that the FEMAT process had violated the provision of FACA, it declined to enjoin implementation of the resultant forest plan. See Northwest Forest Council v. Espy, DCDC, No. 93-1621, March 21, 1994; Bureau of National Affairs, "Judge Rules Not to Block Forest Plan, Says Clinton Administration Broke the Law," National Environment Daily, March 24, 1994.



effective regional scale ecosystem management. To the extent that FWS-led ecosystem management begins to employ social scientists including sociologists, anthropologists, and economists, traditional concepts of the resource management professional will need to change. A multidisciplinary approach requires teams of individuals who can speak to one another, and such interpersonal skills are not a traditional portion of resource management education. Finally, the agencies' ability to implement a multidisciplinary approach will be constrained by current staff types and limits on new employee recruitment.

A longer time frame conflicts with administrative policies and norms that emphasize short term decisionmaking. Administrations function on four-year cycles, and agency and Congressional budgeting takes place on annual cycles. Yet ecosystem management projects often require planning and implementation that employ a temporal scale of decades or longer. Ecosystem management often involves undertaking activities that have considerable up front costs, whose benefits are only revealed over the long term. Yet most political processes seek the opposite: situations where benefits accrue in the short term, and costs are revealed well into the future.

Effective dispute resolution often requires that a conflict be ripe enough for parties to have figured out their interests and incentives to be real enough to promote settlement. By emphasizing a proactive way to avoid conflicts, ecosystem management may focus attention on situations where decisionmaking will be problematic because of a lack of "ripeness." In addition, a perception of crisis often is important to mobilize resources and force decisions, yet one of the underlying objectives of ecosystem management is to avoid the crises that have been so dominant in resource policy in recent years.

The explication of uncertainty that is a premise of ecosystem management is also problematic for administrative and political reasons. The traditional mode of decisionmaking in science-intensive policy such as endangered species policy has been expert judgment: FWS/NMFS experts, recovery teams, and the like deliberating and providing their best estimate of what is an effective course of action. This mode of decisionmaking provides considerable power to administrative agencies, and protects the experts, because it makes challenging these decisions difficult. The risk-assessment approach associated with ecosystem management changes this: By identifying the assumptions and uncertainties inherent in expert decisionmaking, it opens the experts up to criticism and challenge.

As a policy matter, such explication of key uncertainties makes a lot of sense; but as an administrative matter, it is problematic. At minimum, it means experts have to provide justification for their decisions that may not exist in objective facts: that is, their subjective judgment based on their experience and the available evidence may be the best that we can do, but it is hard to justify on factual grounds. As a result, it is likely that decisions will have a hard time taking hold, as they are challenged repeatedly. Experts will probably be more conservative in their judgments, which may be problematic for



issues like endangered species which have real costs associated with action that is less aggressive than needed.

The explication of uncertainty is also problematic politically. Elected officials do not want to have to take the heat for making tough choices. The traditional mode of expert choice might have provided them with decisions they did not like, but at least they could blame the experts and offset political damage caused by adopting difficult courses of action. By being presented with a range of outcomes with different probabilities of various outcomes, they accept the responsibility of setting a socially-desired course of action. This is of course their job as elected representatives of the populace, but on tough choices, it is not a task most elected officials relish.

The adaptive management approach inherent in ecosystem management also has significant administrative and political ramifications. Adaptive management requires ongoing monitoring of past decisions, requiring the expenditure of resources on old programs, rather than investing in new initiatives that are more likely to accrue political capital. It also forces a rethinking of past choices, meaning that agencies will tend to relive nightmares over and over. Adaptive management presumes that agencies have the ability to change courses of action as new information becomes available. But as staff and equipment are deployed, nongovernment interests become dependent, and everyone becomes comfortable with past courses of action, it becomes very difficult to change direction.

Finally, by identifying what experts do not know, their decisions will be easier to challenge in court, and that raises a series of questions: When constitutes adequate evidence to promulgate an administrative rule? How confident should administrative officials be before taking action? To what extent are past decisions binding precedents, even when changing technical knowledge invalidates them? Are existing institutions able to consider and deal with disagreements between technical experts arguing over often-irreconcilable differences over fact and theory? Due to these and other issues, while ecosystem management makes a lot of sense as a proactive way to avoid endangered species-development conflicts, it will face a significant set of implementation problems that need to be thought through.

In spite of these concerns about the administrative problems involved in successfully carrying out ecosystem management, we believe that ecosystem management provides an effective complement to the reactive process established by the ESA. Accordingly, we suggest the following recommendations:

Recommendation #14: The Administration should continue working to incorporate concepts of ecosystem management into resource management and planning as an important complement to the reactive, regulatory approach established by the ESA. It is important that the ESA approach be maintained as a regulatory bottom-line and a set of incentives that will make the ecosystem management efforts more productive.



- The resource management agencies should utilize existing statutory authorities to initiate and participate in ecosystem management efforts. Section 7(a)(1) of the ESA establishes an affirmative duty for federal agencies to conserve species that arguably goes beyond their requirements to consult on projects established under Section 7(a)(2). These provisions can be seen as authorizing agency participation in ecosystem management activities directed at long term biodiversity conservation.
- Issuance of an Executive Order would create additional momentum for changing agency policies to support ecosystem management. An Order could create interagency ecosystem management groups that would work with stakeholders to gather information, assess threats to biological diversity, and work collaboratively to manage these threats. It might also create coordinators within agencies, and foster training of agency staff.

Recommendation #15: Administration efforts to promote ecosystem management should pay explicit attention to the need to utilize concepts of conflict management and collaborative problem-solving to ensure the future success of such efforts. Training agency staff, creating a cadre of capable facilitators, and finding ways to overcome the problems associated with traditional agency behaviors are all necessary.

6. ACUS needs to be involved in the framing and implementation of Administration ecosystem management policies.

For the Administrative Conference, the upshot of a shift to an ecosystem approach to conservation is that the many different agencies and groups involved in framing the approach need help in sorting out the administrative and policy difficulties in implementing such a scheme. ACUS can play a role by providing advice and images of success. Since many of the problems inherent in ecosystem management are problems inherent in dispute resolution, ACUS's experience with ADR can be a valuable source of insight about how multi-party public and private groups can be assembled to work on common problems, and how traditional administrative procedures have been handled to facilitate such interaction. We suggest the following specific actions for possible action by the Administrative Conference:

ACUS Action Item #9: The Administrative Conference should be involved in how the Administration frames ecosystem management as federal policy. Their staff should participate in some of interagency working groups focused on ecosystem management, and provide advice on the content of an executive order should the activities of the work groups results in the generation of an Executive Order becoming likely. ACUS is uniquely qualified to provide input about how to effectively structure administrative decisionmaking processes as negotiated dispute resolution processes, and ecosystem management policies and programs requires this understanding. At minimum, ACUS could:



- Comment on a draft of the report emerging from the public participation subgroup.
- Discuss the role and effectiveness of FACA, the Alternative Dispute Resolution Act, the Negotiated Rulemaking Act, and the National Environmental Policy Act with the legal authorities subgroup.

ACUS Action Item #10: The Administrative Conference should help the resource management agencies figure out how to deal with a number of problematic administrative policies and behaviors, as they set about implementing ecosystem management policy. As described above, a number of problematic administrative practices will need to be dealt with to foster cross-jurisdictional, multi-party decisionmaking inherent in ecosystem management. Among other items, agencies like the Forest Service need help figuring out how to respond to the provisions of the Federal Advisory Committee Act (FACA). It is possible that FACA should be changed to better create an environment for proactively including a variety of interests in agency decisionmaking and implementation, rather than focusing on reactively precluding participation by a limited set of interests.

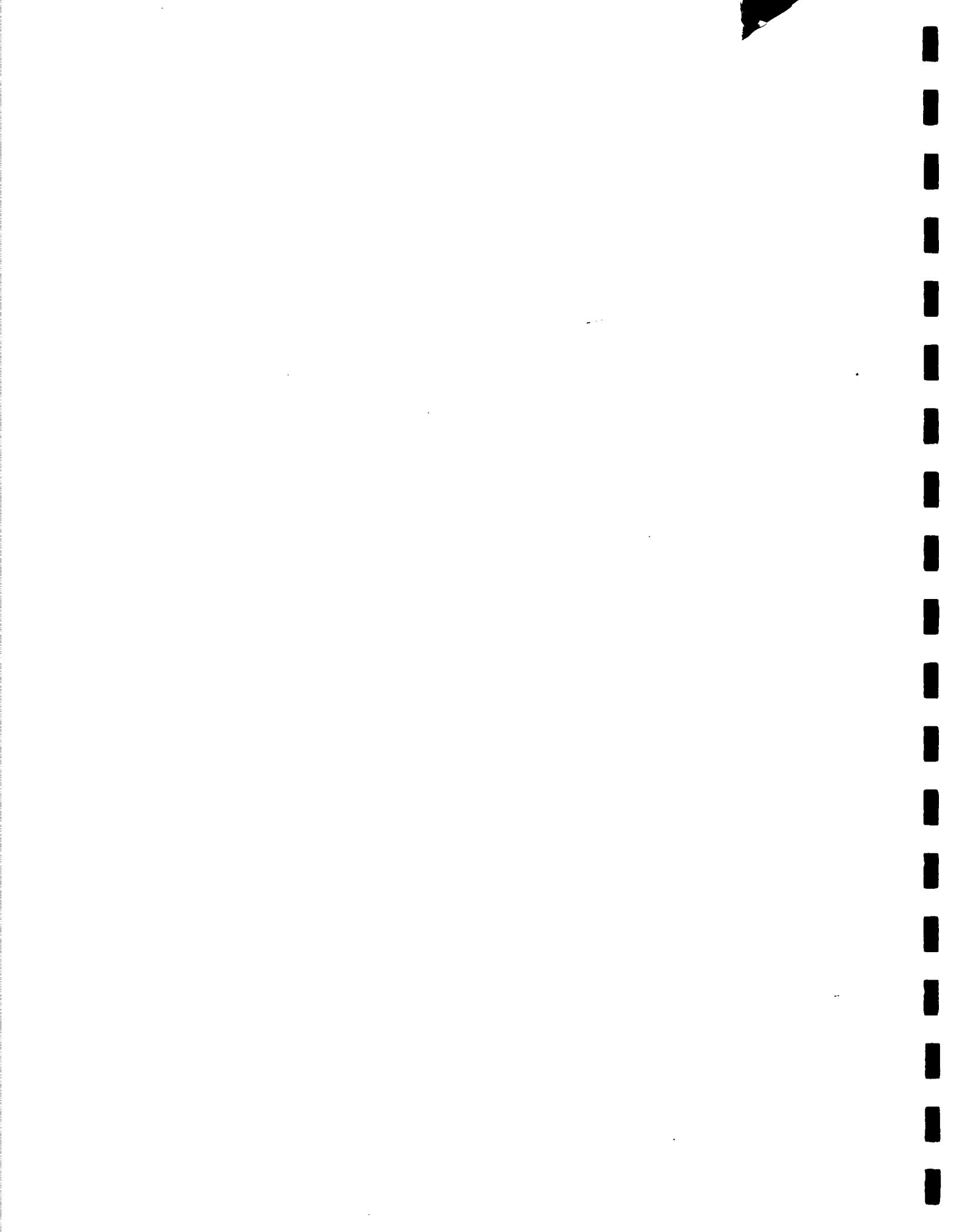
ACUS Action Item #11: The Administrative Conference can play an important role in assisting the process of change in the federal resource management agencies by collecting and disseminating models of success: where agencies and nongovernmental groups have effectively engaged in ADR-type processes or agencies have worked together effectively in interagency arrangements. Often what frustrates implementation of a change in administrative behavior is not having adequate authority or clear direction as provided in law or regulation, but providing imagery to the professionals involved. Images of success can be highly motivating and understandable where policy guidelines can be obtuse and seemingly disconnected from the ground level perspective.¹²⁸

¹²⁸For more information about the use of success stories to motivate changes in organizational behavior, and a collection of situations involving effective agency-nonagency interaction (through dispute resolution, partnerships, etc.), see Julia M. Wondolleck and Steven L. Yaffee, Building Bridges Across Agency Boundaries: In Search of Excellence in the United States Forest Service (Ann Arbor, MI: School of Natural Resources and Environment, 1994), a research report to the USDA-Forest Service, Pacific Northwest Research Station, Seattle, WA.



III. APPENDIX: CASE STUDIES

1. Recovery Implementation Program for the Endangered Fishes of the Upper Colorado River Basin
2. Platte River Management Joint Study
3. The Salmon Summit
4. The Keystone Biodiversity Dialogue
5. Turtle Excluder Devices: Negotiated Rulemaking on a Politically-Charged Issue
6. San Bruno Mountain Habitat Conservation Plan
7. The Coachella Valley Habitat Conservation Plan
8. The Grayrocks Conflict
9. Terror Lake
10. Bachman's Warbler: The Phantom Songbird
11. Applegate Watershed Partnership
12. Negrito Ecosystem Project
13. Yakima Resource Management Cooperative





CASE STUDY #1

RECOVERY IMPLEMENTATION PROGRAM FOR THE ENDANGERED FISHES OF THE UPPER COLORADO RIVER BASIN ¹

Introduction

In progress today is a recovery implementation program for several endangered fish species in the Upper Colorado River Basin. This program was developed by and continues to be a collaborative effort of the various groups and governmental agencies with an interest in the water and wildlife resources of the river. This case study describes the collaborative process followed in trying to build a better understanding of the endangered fish species' status and needs and, in turn, a plan that would guide the Fish and Wildlife Service in developing future biological opinions on proposed water diversions. While far from a model alternative dispute resolution process, the effort nonetheless presents the problems and potentials of applying collaborative strategies in a situation pitting endangered species against development interests, particularly those involving issues of data uncertainty. While still ongoing, the effort has thus far been a mixed success, accomplishing some procedural milestones in simply engaging all the groups in a common dialogue, while its substantive results are still subject to debate and criticism.

The Colorado River and Its Endangered Fish Species

Over 1400 miles long, the Colorado River passes through two countries and has a drainage basin in the United States of 242,000 square miles. Although the Colorado receives less water per square mile of drainage than any other major river in the United States, it provides fifteen million people with water for municipal, agricultural, mining, industrial, and recreational purposes. The river has been altered to develop and control its water to the extent that it has been described as the most heavily used, controlled and fought-over river in the world (Wydoski and Hamill, 1989). While 1991 flows on the Colorado were thirty-five percent less than 1960 flows, the river still has appreciable water.

Legal control of the water in the Colorado River drainage began with the Colorado River Compact of 1922. The compact 1) divided the water between the seven states composing the upper and lower basin, 2) anticipated demands for water in Mexico that were eventually agreed upon, and 3) imposed certain restrictions on quantities and scheduling of flows. The 1948 Upper Colorado River Compact provided annual consumptive rights for Arizona and apportioned the remaining water to the upper basin states of Colorado, New Mexico, Utah, and Wyoming. The division of water among the

¹ This case study was developed by Raney Lamey, Clare Ryan, Rachel Selk and Julia Wondolleck.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

upper and lower basin states cleared the way for the development of upper basin water projects. In 1956, the Colorado River Storage Project Act authorized the construction of large main-stem dams on the upper Colorado River and its tributaries. Six reservoirs (Lake Powell, Flaming Gorge, Blue Mesa, Morrow Point, Crystal, and Navajo) were formed as part of the storage units.

Historically the Colorado River and its larger tributaries were warm and turbid in summer, and characterized by large changes in volume and velocity. Several unique large-river fishes evolved in the Colorado River system in response to the geology and climate of the Great Basin, and the resulting riverine environment. The four fishes—the Colorado squawfish (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*), and bonytail (*Gila elegans*)—are listed as endangered. Recovery plans exist for each fish except for the Razorback Sucker, which was not listed as endangered until 1991 so a recovery plan is currently being drafted. These four species are referred to collectively as the endangered fishes of the Upper Colorado River Basin.

The principal causes of the decline of the endangered fishes of the upper Colorado River basin are believed to be competition and predation by introduced fish, blockage of migration routes, and alteration of streamflows and water temperatures (Wydoski and Hamill, 1989). The native fish populations have been harmed by the various fish species that were accidentally or intentionally introduced into the upper basin. In 1976, the Colorado River Wildlife Council listed twenty species (40%) as native to the river system and thirty species (60%) as introduced. By 1982, the number of introduced species increased to 76% of the fifty-five total species in the upper basin (Wydoski and Hamill, 1989).

More obvious than the problem of introduced fish are the physical changes in the riverine system due to water development. The Colorado River Storage Project dams and reservoirs, along with private and local water developments, have altered the turbidity, natural flow regimes, and water temperatures in the Upper Colorado River Basin. Water development has changed the characteristic high spring and low winter flows to much more stabilized seasonal flows that have rapid daily fluctuations in some areas. In addition, water projects have resulted in direct losses of stream habitat through inundation by reservoirs and blockage of migration routes. For example, drought conditions in the late 1800's, followed by prolonged flooding in the early 1900's, stimulated the demand for water control in the lower Colorado River. The construction of Hoover Dam in 1935, and other lower basin dams, changed much of the free-flowing river to an environment with greatly altered streamflows and temperature regimes. Associated with these habitat changes, the endangered Colorado River fishes declined markedly in the lower basin. Only large, old adults of the bonytail and razorback sucker were still found in several reservoirs in the lower basin in the late 1980's. A viable population of the humpback chub remained only in the Little Colorado River near its confluence with the Colorado River.

Instituting changes to protect the endangered fish species presents a number of challenges. They are perceived by many residents as "trash" fish—that is, fish with no worth as game fish, and furthermore as fish that compete with more valuable sport-fish species. They lack the appealing qualities of other endangered species such as the peregrine falcon, the bald eagle, or even the wolf or grizzly bear, presenting problems for environmental groups attempting to garner support and protection for the species. One resident summed it up with the question, "who wants to be the champion of the razorback sucker and the bonytail chub?" Many people outside the area are unaware of the fishes' existence, and residents along the river are not adept at identifying the species. The fish are viewed by some as obstacles to economic development in the area, and local public sentiment characterizes them as impediments to water development along the undeveloped reaches of the upper Colorado River Basin.

The Upper Colorado River and The Endangered Species Act

The clash between the endangered fish species of the Upper Colorado River and development interests along the river comes to a head whenever federal agencies attempt to fulfill their requirements under Section 7 of the Endangered Species Act. Section 7 of the Endangered Species Act (ESA) requires a federal agency when authorizing, funding, or carrying out any project, to ensure that its actions are not likely to jeopardize an endangered or threatened species or adversely modify their critical habitat. To ensure against jeopardy to endangered or threatened species, the action agency must consult with the U.S. Fish and Wildlife Service (FWS) and obtain its biological opinion. The action agency prepares a biological assessment for federal construction projects that require an environmental impact statement, and the information in the assessment is used by the FWS in its biological opinion. If the FWS determines that the effects of the agency action are likely to jeopardize an endangered or threatened species, it must recommend reasonable and prudent alternative courses of action, if available.

In the late 1970's, the FWS was conducting consultations on Bureau of Reclamation (the Bureau) projects on the upper Colorado River Basin. Both agencies recognized the lack of data on the endangered Colorado River fish. Faced with the Bureau's need for opinions and limited biological data, the FWS issued a series of opinions which stated that the projects would jeopardize the fish, but if the Bureau would maintain the status quo by releasing flows at least equal to the amount of each project's depletion, jeopardy would be precluded. In 1978, the agencies agreed to cooperate in an intensive three-year study to determine the flows necessary to preclude jeopardy to the fish.

In 1980, while the Bureau's study was in progress, the city of Cheyenne, Wyoming, and the state of Utah were pressing for biological opinions for their projects. Their projects would also deplete flows, but the sponsors, unlike the Bureau, did not have the ability to release water from other reservoirs to prevent jeopardy. As a result, the FWS in August 1980 realized that a conservation plan based on the ongoing study would be needed. The new plan was to provide for the preservation and recovery of the fish and

describe the habitat criteria, including flows, that the projects needed to meet to avoid a jeopardy opinion.

The Windy Gap Process

By the fall of 1980, consultation on one project being developed for six cities in Northern Colorado, was at a standstill. The project, called Windy Gap, would annually deplete up to 90,000 acre-feet of water 150 miles from the endangered fishes' habitat on the Colorado River. This diversion was comparable to previous requests since 1978 that had been issued jeopardy opinions by the FWS. The project would involve a transmountain diversion from the upper headwaters of the Colorado River through the Continental Divide to the front range. If the Windy Gap developers conducted a three year study on the fish and created some backwater habitat, then FWS promised not to issue its readied jeopardy opinion.

As a result of the required Windy Gap study, the water users group proposing the project eventually found that in "a 40-foot deep channel, 2 inches of the top surface" water would be depleted. The FWS, the Bureau, and project hydrologists agreed that the effect of the depletion on the fishes would be difficult to detect. The FWS, however, believed that any additional depletion was likely to jeopardize the survival of the fish. The agencies finally agreed that jeopardy would be offset if the Windy Gap Project proponents would provide funding (\$550,000) for some of the habitat manipulation and research needs identified in the FWS's developing conservation plan for the area.

It was soon recognized that the Windy Gap approach could be used for similar projects. From 1981 to 1985, the FWS issued thirty-three Windy Gap-type opinions for projects that could deplete up to 415,914 acre-feet yearly (Zallen, 1986). Under the Windy Gap Process, the sponsor of a private water development project was required to compensate monetarily for actions that would result in jeopardy to threatened or endangered species. (The process was not applicable to Bureau of Reclamation projects. Instead, the Bureau agreed to set aside water in its reservoirs for later release to habitat occupied by the endangered fishes.) The process involved a one time monetary contribution based on a formula that considered the quantity of water that would be depleted, the volume of water remaining after interstate compact flows to the lower basin were delivered, and the estimated cost (\$25 million) of implementing a comprehensive fishery conservation effort. Consultation under the Windy Gap Process resulted in nearly 1.3 million dollars being provided to the FWS between 1981 and 1987 for conservation of the endangered fishes. The funds are used to study the ecological requirements of the endangered fish, propagation and stocking, habitat improvements, and other recovery efforts.

The conditional jeopardy opinions had critics in both the environmental and water user communities. Environmentalists felt that the Windy Gap process was a sham because the water developers needed only to pay to develop. To add insult to injury, the Windy Gap developer completed the project before they had completed the study on the

effects of the project on the fish. The water users' complaint was that the ESA was a national statute and even though federal funds were arguably not available under sections 4 and 5 of the ESA, local groups should not have been forced to fund federal efforts. Due to Congressional testimony by both environmental and water development interests, the Windy Gap process was not used after 1985 for private, large water projects.

The Move Towards Negotiation

The 1982 amendments to the ESA directed Federal agencies to coordinate with state and local agencies to resolve water resource issues in concert with the conservation of endangered species. This amendment was added to the ESA to specifically address the conflicts that had developed concerning water development and conservation of the endangered species in the Upper Colorado and Platte River basins.

In late 1983, a deadlock developed. Water developers could assert their right to develop the remaining appropriable water under the interstate compacts and the Colorado constitution, but if the ESA policy prevailed, they could be faced with battles in court and Congress. Environmentalists knew they had a useful tool in the ESA, but it was unlikely they could generate sufficient funds or interest for a court battle. Moreover, after the Windy Gap opinions, the environmentalists could not count on FWS to enforce the ESA "properly." The courts had been the best defenders of the ESA, but no case brought under the statute had ever completely terminated a project. The state governments could not move without alienating their development or environmental communities. If the compacts were reopened, the states might lose legal access to what little appropriable water there was.

By 1984, FWS had issued over one hundred biological opinions concluding that the site-specific cumulative effects of water development and depletions were likely to jeopardize the continued existence of the endangered Colorado fishes. Also in 1984, FWS issued a Draft Conservation Plan that outlined a comprehensive program for recovery and specified minimum streamflows needed by the endangered fishes for all the major rivers in the upper basin. Several states and water development organizations responded that the FWS position on water depletions and minimum flows was in direct conflict with state water rights systems, interstate compacts, and related Supreme Court decrees. They threatened lawsuits and amendments to the ESA. A bill was introduced to Congress to have the ESA amended to exclude the Colorado River Basin. Simultaneously, environmental groups pursued litigation to establish the supremacy of the ESA over the water compact rights and duties of the states. The Draft Conservation Plan drew harsh reactions from the upper basin states because it based its recommendations on historic conditions rather than on biologically documented needs of the endangered fishes.

As a result, a major controversy threatened to develop and embroil the various state, federal and private interests in a confrontation over endangered species protection and water resource development. The parties recognized that such a confrontation was

unlikely to result in progress toward recovery of the fishes and could lend a measure of uncertainty to water development in the upper basin. Consequently, the FWS took the lead in organizing a Coordinating Committee to evaluate alternatives and develop a program for recovering the fishes in a manner consistent with state water rights systems.

The Upper Colorado River Coordinating Committee

The Upper Colorado River Coordinating Committee (UCRCC) was formed in March 1984 as a response to a petition by water users groups to the Department of the Interior. The initial working group that was established, and which soon after became the UCRCC, consisted of two Bureau of Reclamation regional directors; Galen Buterbaugh, the regional FWS Director; the DNR directors of Colorado and Utah; and a representative from the Wyoming Governor's Office. The final member, Frank Dunkle, served as executive director of the Committee.

Dunkle's involvement was critical to the early momentum of this effort because his job was to get and to keep the parties at the negotiating table. Dunkle had worked for the Montana Fish and Game Department for almost twenty years, ten years as director, when he resigned in 1972. Since then he had served as a state senator, as executive director of the Montana Mining Association, and as executive director of the Montana Republican State Central Committee in 1980. He joined the Denver FWS Office in 1983 as the Colorado Endangered Species Coordinator. Because of his influence he was able to muster the political and financial resources to make this process happen.

The Coordinating Committee's charge was narrow. Recognizing that earlier consultations under Section 7 of the ESA had found that new water projects would likely jeopardize the continued existence of the listed fish species, the Coordinating Committee was to identify reasonable and prudent alternatives that would preserve the species while permitting new water development to proceed in the upper basin. During their initial discussions, the parties concluded that both the biological requirements of the four species and the hydrology and management of the Upper Colorado River Basin were exceedingly complex. They agreed that a comprehensive program for implementing a broad range of conservation measures was needed.

At the outset, the Coordinating Committee sought a non-adversarial approach by an independent group in establishing the baseline for the process. The structure and functioning of the UCRCC was specifically designed to avoid the shortcomings of becoming a Habitat Conservation Plan (HCP) under Endangered Species Act Section 10 or an advisory committee under the Federal Advisory Committee Act (FACA). When UCRCC first met, the group was leaning towards the Section 10 HCP process because it seemed cheaper and more effective than establishing an independent group. However, the Colorado representative to the group described and supported a process that would be loosely modeled after the collaborative Denver Water Roundtable process. This method would allow the parties to use in-house staff and would be a more regional- and research-oriented approach than would an HCP. Thus, they would not be tied into one statutory

section and would not face the costs of an independent committee. Additionally, the parties did not want to violate any legal duties or rights because such an act could create a cause of action under one of the interstate compacts or other statutes. Since each party, including FWS, would be acting under its traditional authority and since the ESA exempts any committee created under its jurisdiction from FACA, neither the UCRCC, nor the later implementation committee, would be subject to FACA requirements.²

The FWS's main priority during the first meetings was to get the scientists working together. Most state and water user discontent at this time was directed at the FWS scientists who had spearheaded the original Draft Conservation Plan that led to the UCRCC. This plan had been developed in-house with limited data and without the involvement of other agencies and groups with a stake in its findings and recommendations. It was the discrepancy between the historical flows (and FWS's reliance on it for the Draft Conservation Plan) in the absence of biological data and understanding that became the heart of the ensuing negotiations. Thus, Dunkle and FWS Regional Director Buterbaugh tried to emphasize the need for the Coordinating Committee to get the scientists started resolving these differences. "Their [the technical committee] charge is to agree as best they can on the biological data and the adequacy of it and to tell us where are the gaps that we need to focus our research in the future." Both Buterbaugh and Dunkle stressed the data negotiations throughout the meeting, best summarized by Dunkle who stated, "I think that the data just has to be resolved so that everybody knows where they're going." He urged scientific negotiations before any overall format or process was established.

One of the first activities of the UCRCC was the formation of biology and hydrology subcommittees to "review and synthesize the existing technical information on the endangered fishes and their streamflow requirements" (Wydoski and Hamill, p. 21). The key scientific issues discussed by these subcommittees revolved around data on instream flow needs of the fish, the biological needs of the fish, and the most significant obstacles to their recovery. The environmentalists (who were unrepresented on the technical committee as a voting member) were certain that the low flows were the primary cause of the endangered fishes demise, while the water users felt that non-native fish predation and competition was the primary cause. Since the bulk of the data was located in two computers, the scientists from the states, FWS, and federal water users (later joined by private water developer scientists) were directed to reach a common understanding and conclusion. Tom Pitts, a consultant to and representative for water user groups such as water conservancy districts, represented the water user community from the start, while Carse Pustmueller of the National Audubon Society, attended the meetings as a non-voting environmental representative shortly after the process began. She had left her job in the State of Colorado's Endangered Plant Program to join the Upper Colorado, as well as the North Platte, process.

²Section 4(f)(2) of the Endangered Species Act exempts recovery teams from the provision of the Federal Advisory Committee Act.

Environmental groups were unrepresented on the technical committees as voting members because of Dunkle's belief that "the minute the environmentalist's messenger comes back with something they don't like to hear, they will behead him and send another one and so you're going to have a continual education program going." On the other hand, he felt it was necessary to have water users involved immediately in all capacities in order for them to buy into the process.

The Parties

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service is responsible for conserving, protecting, enhancing and managing the nation's fish and wildlife resources, and administering the Endangered Species Act. In carrying out its responsibilities, the FWS is responsible for the protection and recovery of endangered species (16 U.S.C. 1531 et. seq), including the four fish species of the Colorado River System. The FWS provided the organizational focus needed to develop the program in furtherance of its duties under these Acts. Concurrent with the cooperative effort the FWS developed recovery plans for the fishes and designated critical habitat, and continued to issue biological opinions.

Bureau of Reclamation

The Bureau of Reclamation is primarily engaged in construction and maintenance of irrigation works for storage, diversion and development of waters for the reclamation of arid and semi-arid lands. The majority of the Bureau's projects are large dams and reservoirs storing runoff for release into the channel during dry periods. The Bureau is responsible for operation of a number of Federal reservoirs on the system, ranging from large reservoirs that are used to regulate deliveries under a set of interstate compacts to smaller reservoirs that were constructed to ensure a continuing supply of water for beneficial use. The Bureau, like all federal agencies, is bound by the requirements of the Endangered Species Act.

Western Area Power Administration (WAPA)

WAPA is part of the Department of Energy, and is a latecomer to the process. They appear to control most of the hydropower money and policy in the region. When first approached about the process, WAPA rejected the idea. They finally joined the program in 1986, after realizing that it was a good forum for addressing issues with all of the parties at once, rather than independently.

The States

The States play a key role in determining how the river system's water resources are developed and have a corresponding interest in legal requirements that could constrain water resource development. At the same time, states have historically been

responsible for management of fish and wildlife resources, including threatened or endangered species that occur within their territories.

Colorado is the most involved of the three states, and was the primary moving force behind the process. The state has a keen interest in seeing that water development and environmental interests are both met.

Utah and **Wyoming** have similar interests as Colorado, only to a lesser degree in regard to the Upper Colorado River Basin. They do have legal interests under the interstate compacts that need to be represented in the negotiations and implementation of the program. Even though the Wyoming river portion does not contain endangered fishes, its development will alter the flow and habitat downstream in Colorado. There was also a realization that these states might soon be facing the serious problems that Colorado was facing, so they should be involved.

New Mexico is also one of the Upper Colorado River Compact states, and their water interests are about 50,000 acre-feet per year from the San Juan River. In 1984, the Coordinating Committee proceeded on the belief that the endangered fish were not in the San Juan and that New Mexico's interest in the process was minimal. New Mexico is not a party to the Agreement, and the Recovery Implementation Program does not extend to the San Juan River. Interestingly enough, one of the species was recently discovered downstream of the construction site for a water project on the San Juan. It is unclear at this point what the lack of involvement from the state of New Mexico means for the implementation program.

Water Development Interests

Tom Pitts represents the Colorado Water Congress, the Utah Water Users Association, and water development interests in Wyoming. These are the groups that petitioned the Department of Interior to institute the negotiations process in early 1984. They did so under the threat of losing all future development because of jeopardy opinions and recovery plans as portrayed in the 1983 Draft Plan.

Environmental Groups

Environmental groups are represented by the Audubon Society, the Colorado Wildlife Federation, the Environmental Defense Fund and The Nature Conservancy. Their primary interest is acquiring and maintaining instream flows for the endangered fish.

Barriers to Issue Resolution

Substantive Difficulties

Resolving the identified scientific issues proved to be quite difficult, if not impossible. Part of the problem with the existing technical information was that detailed work with the fishes had only begun a few years before the process started. There were many hypotheses about the fish, and little consensus regarding what the real problems were. While there was some ongoing collection of new data, for the most part the committees used existing data which was limited. A member of the Biology Subcommittee described the process:

The role of this group was to provide technical information useful in the development of the plan. We synthesized information in a general way, and what emerged was typical of a committee document—it goes off in a number of different directions, and there was no effort to prioritize among management activities. We did not develop complete consensus. If there was disagreement, we just added things to the list of recommendations. There were not a lot of biologists on the group, only about four of us, and we created little memorandums as sources of information to the group. There were no limits on what could be added to the final recommendations. Biological, budgetary and logistic elements were not taken into account in the development of the Plan.

A member of the Hydrology Subcommittee related a similar experience:

The technical groups gave some input, but the group relied heavily on one person for technical advice. The group couldn't come to agreement on the technical issues, so a plan was developed that recognized that there were large data gaps. The plan has tasks that direct people to analyze what data is there. We couldn't wait any longer for all the data to be collected; we needed a plan now, something to get all parties working together.

Procedural Difficulties

The Subcommittees tried to use a consensus process as much as possible when making decisions. Professional facilitators were not involved, and subcommittees were facilitated by the chair of each subcommittee, usually the Fish and Wildlife Service representative. This structure created problems for those who had to facilitate as well as represent their agency's interests in the discussions, but most feel that the process worked. One of the chairs commented, "the consensus process has worked fairly well and has passed some tense situations. We have never had professional facilitators involved, so it has been rough at times." The committees did use a voting process on several issues, and if agreement could not be reached, the issue was put on hold or simply

not resolved. Another subcommittee member noted, "there's been a lot of time, effort and money invested, so we do try to compromise."

The effort required a great deal of time and other resources from participating agencies. The environmentalist groups felt they were at somewhat of a disadvantage because they had less resources and personnel available for participating in the process. One environmentalist commented, "any time we would go in to a room, it was ten against one." In the mid 1980's, the Colorado Program was not a high priority issue for the environmental groups. They were involved with other issues, including the North Platte River dispute, which took more of their time. Moreover, several environmentalists felt it was unlikely that large scale water diversions would be allowed in the Upper Colorado Basin, for economic reasons and the EPA denial of the Two Forks project in 1989.

Soon after the UCRCC process got underway, Frank Dunkle was appointed Director of the US Fish and Wildlife Service. At that stage in the process, Dunkle had initiated a consensus process of face-to-face discussions of the issues; he had successfully kicked off the process with the participation of all the major parties and the creation of a structure to deal with the issues. John Hamill, his assistant, took over as the Colorado River Endangered Species Coordinator. Hamill brought to the UCRCC the implementation- and results-oriented leadership it needed to continue its progress. After taking over, Hamill became a central focus of the Management Group; he was the workhorse of the program. One member said if FWS replaced Hamill, "it would all become so fragile...it wouldn't collapse, but it would be unstable." The water users have confidence in him. And the environmental groups are relying heavily on the FWS, in the person of Hamill, to "hang tough" and not allow development without increased stream flows. Thus, Hamill provides the critical link between the water users and the environmentalists because they both trust him while not necessarily trusting each other.

The FWS conducted the initial three and one-half year negotiating process in an open manner. The public was welcome and notice of the meetings was given to the extent practicable. The process did not receive much media attention although there were a few informational articles in some Colorado newspapers. During this time period, the data was reconciled, and priorities were established for what data needed to be obtained from field work. On the basis of this scientific and policy analysis, a fifteen year time frame was set to achieve recovery, to establish several stable populations for each endangered species, and to establish complementary water and wildlife management operations. The Recovery Implementation Program for the Endangered Fish Species in the Upper Colorado River Basin was finalized in September 1987.

The Recovery Implementation Program

On January 22, 1988, after completion of the environmental assessment of the Recovery Implementation Program, the Secretary of the Interior joined the Governors of Colorado, Utah, and Wyoming, and the Administrator for the Western Area Power Administration in executing a Cooperative Agreement to formally endorse, adopt and

implement the program. The agreement created a ten member Upper Colorado River Implementation Committee (UCRIC) to oversee the FWS Recovery Program. Voting members include the FWS, the Bureau, Western Area Power Authority, the states of Colorado, Utah, and Wyoming, a representative of environmental organizations, and a representative of private water development interests in the three states. Creation of the Implementation Committee resulted in the disbanding of the Upper Colorado River Coordinating Committee as well as the Biology and Hydrology subcommittees. In turn, a Technical Working Group and a Management Working Group were created to oversee on-going activities.

The Upper Colorado River Implementation Committee

The Implementation Committee is charged with overseeing the development and implementation of specific recommendations for each of the recovery elements. The Committee has more responsibility for management than the recovery teams, which are generally biological and research-oriented groups. To accomplish its charge, the Implementation Committee prioritizes the program work assignments and returns these priorities to the chairs of the Management and Technical Committees. The Implementation Committee also meets two or three times a year, for which, prior to the meeting, the chair sets the agenda and mails a copy to committee members. The members are free to make additions before or at the meetings. The meetings are generally held in Denver because of the number of people involved living in that area, but occasionally a meeting is held in Salt Lake City. These meetings are facilitated by the Implementation Committee chair who can cut off someone when necessary, but everyone usually gets the floor as long as they want. Although this allowance is time-consuming, the group believes it is necessary for progress. If and when the chair does cut off a speaker, the continuing objection is noted in the minutes. The meetings are open to the public and anyone can comment. However, only the designated members of the committee can vote.

The Program

The signing of the cooperative agreement that created the UCRIC was the first step towards the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. The Recovery Program includes a range of conservation activities determined necessary to protect and recover the Upper Colorado River Basin's rare fish species while allowing for new water development. The ultimate goal of the Recovery Program is the recovery and delisting of the four endangered species. The initial timeframe for achieving this goal was set at fifteen years from the time of the Recovery Implementation Program's acceptance in 1987.

The Recovery Implementation Plan requires a cooperative federal-state-private effort and includes programs to acquire instream flows for the fish pursuant to state law. The plan further calls for a change in operation of Bureau dams to benefit the fish. Non-flow programs, such as stocking native fish, controlled stocking of sport fish, and habitat development, are also important elements of the proposal. The programs are designed to

offset depletion impacts of water projects and allow the FWS to issue non-jeopardy biological opinions. There are five principal elements of the recovery program.

1) Provision of instream flows. The FWS will quantify instream flows needed for recovery of the four rare fishes in the Upper Colorado and Green River subbasins. The Upper Colorado River Implementation Committee, in cooperation with the state agencies, will identify and recommend alternatives to the Secretary of the Interior for implementing the FWS flow recommendations. It is anticipated that the instream flow needs of the rare fishes in the major reaches of the Colorado and Green rivers can be provided through program refinement and protection of releases from federal reservoirs, such as Flaming Gorge and Blue Mesa. In addition, the Recovery Program provides for water rights acquisition in relatively unregulated systems such as the Yampa and White rivers, conversion of those rights into instream flows for the fish, and administration of those rights pursuant to state water laws. In 1988, Congress appropriated \$1 million to initiate the acquisition of water for instream flows.

2) Habitat development and maintenance. The FWS and the states will perform research to determine if and how development and maintenance of habitat (creation of backwaters, construction of jetties, fish ladders, etc.) will contribute to recovery.

3) Native fish stocking. If practical, a hatchery, rearing, and stocking program will be implemented as a means to produce fish for research and to augment endangered fish populations. Consideration will be given to supplementing existing populations of the endangered fishes where studies conclude that it would help promote self-sustaining populations.

4) Management of non-native species and sportfishing. Some introduced species are known to prey on or compete with the endangered fishes. In addition, mortality of the Colorado squawfish and humpback chub may increase their vulnerability to anglers. These potential recovery problems will be closely monitored by Colorado Fishery Project personnel, the Colorado Division of Wildlife, and the Utah Division of Wildlife Resources.

5) Research, data management, and monitoring. The Upper Colorado River Implementation Committee meets periodically to review research progress and data management on the life history, ecology, and habitat requirements of the endangered Colorado River fishes, as well as the effectiveness of management and recovery activities.

Program Funding

The estimated expenditures for the fifteen-year recovery program are divided into two areas, the annual operating budget and capital funds. The projected annual budget for the Recovery Program is \$2.3 million, adjusted annually for inflation. Funding for the

Recovery Implementation Program is a cooperative responsibility; sources include federal and state governments, power and water users, and private donations. FWS has contributed about \$600,000 per year toward this annual cost and contributions by proponents of non-federal water projects offset their depletion impacts by contributing \$10 per acre-foot (adjusted annually for inflation) based on the average annual depletion of the project. Water projects operated by the Bureau were exempted from the depletion charge because it was to contribute over a million dollars a year to the program (in 1993 the amount was close to two million). Additionally, the three states contribute a total of \$200,000, which consists of \$100,000 from Colorado, \$75,000 from Wyoming, and \$25,000 from Utah.

The Congressional delegations from the three states have thus far voted unanimously on each issue of concern to the Upper Colorado River program. This cohesiveness has proven invaluable in obtaining funding. Not only are there guaranteed votes in favor of funding, but the regional unanimity itself purchases votes of other members. There are no regional or party conflicts to pull votes against the project. During 1987, the Congressional delegations from Colorado, Wyoming, and Utah, as well as water-use and environmental lobbyists, persuaded Congress to grant them \$1 million for the first year. Since then support has increased to its annual budget of roughly \$2.3 million, with funding opportunities for water rights acquisitions. Even those members of Congress uninterested in the issue are likely to feel the money is better spent in a region with resolve and solidarity, instead of in a region without an idea of, or divided over, what to do. However, beyond the annual operating budget, recovery proponents wanted Congress to establish two capital funds: a minimum of \$10 million for the purchase of water rights to establish instream flows required by the fish, and a \$5 million fund needed to initiate other recovery construction programs like hatcheries, additional fish passageways, and habitat modification. Yet, since the \$1 million Congress granted in 1988 for the acquisition of water rights, no further capital funds have been offered.

Controversial Aspects of the Program

Several aspects of the Recovery Implementation Program have been controversial, particularly the recovery elements related to habitat improvement, management of predators or competitors, and the operation of federal reservoirs to meet the habitat needs of the fish. However, the most controversial aspect of the program centers on the process for conducting section 7 consultations. The Program does not identify a process for consultation on direct impacts, like the obstruction of migration routes, alteration of physical habitat, inundation of riverine habitat, and temperature modification from reservoir releases. Direct project impacts are addressed by FWS on a case-by-case basis through the section 7 consultation process.

Under the Recovery Implementation Program, the FWS has determined that project water depletions, which the FWS has consistently maintained are likely to jeopardize the listed fishes, can be offset in two ways. First, the program activities can be partly funded by water project proponents through a one-time contribution to the Recovery Program in

the amount of \$10 per acre-foot (adjusted annually for inflation) of the project's average annual depletion. Second, the depletions can be offset by applying the appropriate legal protection of instream flows pursuant to state laws. FWS has taken the position that protection of instream flow needs of the fishes must proceed concurrently, and not lag behind, water depletions in the Upper Colorado River Basin. Consequently the \$10 per acre-foot depletion contributions for the indirect impacts of water depletions is being implemented only on a case-by-case basis, depending on whether sufficient progress has been made towards obtaining instream flow protection.

Reactions to the Upper Colorado River Process and Outcome

Was the Process a Success?

Most participants in this process expressed both praise and criticism of the effort. While many appreciated elements of the process used to reach decisions, they also expressed fear that the outcome was less than satisfactory. On a positive note, all participants interviewed commented that the process was useful in that it successfully brought all opposing viewpoints together at the same table, and each was able to build a more complete understanding of the others' positions. Most participants developed and continue to have a high professional regard for each other, an outcome of the process they all value and appreciate.

After working together for several years during negotiations and now during implementation, some of the members have developed enough respect for each other to forego the letter of their own agenda in deference to another member's position. For example, when the Colorado biologist began pushing for a native species sportfishing campaign at the request of the state, the environmental group representative and some others felt the idea had little merit. However, because of the biologist's abilities and the state's reliance on sportfishing income, the other members accepted the proposal, on the condition that the program be terminated or redesigned if it hurt or impeded fish recovery. So the spirit of the environmental groups' agenda says leave the fish in wilderness conditions without hatcheries or stocking but the letter of it is followed by the environmentalists' belief that such a hatchery program is not threatening and will be terminated if it does harm the fish.

Although by 1990 the process had yet to be confronted with any major issues and participants doubted there would be any more large diversions proposed for the Upper Colorado River, most groups were glad they participated. Agency representatives appeared to be the most positive about the process. Lynn Kaeding of the FWS thought "the process was successful in that it brought people together, and also that once the plan was approved, it brought money to the issue." A FWS staff person suggested the process was successful because a plan was developed and the agency now has a framework within which to work. Others cited the success of the program in terms of the value of the research that has been initiated and funded as a result. Non-agency participants also expressed the value of the process. One water development participant said "the process

is working. There is an allocation of water for the fish in place [Reudi Reservoir], and several other possibilities for habitat are being explored. We get along quite well, and all of us are trying to make it work." A representative from the Western Area Power Administration (WAPA) found value in the institutional consensus process, but admitted it was fragile because no one is bound to the agreement:

FWS has to take 'dirty' money from the developers for its program to be successful, but they still have control of the situation in order to fulfill their mission. The alternative is 'NO' to every proposed development and probable alteration of all federal operations as well. Here, the researchers get to call the shots, and they have money, while other biologists have to sit around and wait for a section 7 proceeding and then do the research in a rush.

Some environmental participants believed the process was a success because it benefited fish recovery; while water projects without direct impacts on the fish are "guaranteed" a "no jeopardy" opinion by the FWS according to the recovery agreement, the FWS has interpreted the agreement as requiring a finding of progress towards fish recovery before it will issue such an opinion. For example, one decision [Muddy Creek] required that 3000 acre feet be set aside for release annually, until the Upper Colorado program acquires other water rights. Bob Weaver of the Colorado Wildlife Federation acknowledged some positive results that would not have been achieved without the process: "This decision is a stronger opinion than we [environmentalists] ever would have gotten without the Agreement. It's all made possible by the education of the developers and the water users—and the environmentalists too—so that there is a much better understanding of the issues and that's because of the 'hands on' nature of the program." Weaver also expressed confidence in the program because:

So far there has been a high level of cooperation between the different interests. It's well structured and is a good vehicle to achieve our goals. This is the first time that a systematic approach has been used to develop information to benefit the fish. It's amazing how little is known about them biologically or in terms of habitat, but we are well on the road to learning.

However, some environmental participants were not as optimistic about the outcome. One representative commented that "the actual implementation hasn't gotten anywhere. There is very little pursuit of money and resulting water rights for the fish. One of the reasons the Colorado process is a 'success' is because it hasn't been confronted with any real issues yet." A representative from a different environmental group reflected that:

The best way to improve habitat is to change the way the big reservoirs are operated. This program makes it possible for that to occur. The program is moving at a glacial pace, and I don't know if the species will be saved.

Water developers are still holding out hope that they can build something. The process has been chaotic, and the group is inventing something as it goes, and we have wandered down a number of blind alleys.

Major Criticisms of the Process

Two of the most frequent criticisms of the decision-making process itself include the lack of effective facilitation skills and the political nature of the decisions. First, facilitators were appointed by default (the committee chairs), who either lacked the necessary skills or the time to adequately prepare for this role. This was exacerbated by the problem the facilitators had playing two roles: that of facilitator, trying to act in an unbiased manner to build consensus, and that of agency or interest group representative, trying to reach the specific goals of his or her organization. Because of both the lack of skills and duality of roles, several work group members commented that decisions were not really reached by consensus. If there was disagreement, the items were simply added to the list of recommendations, even if they were conflicting with other items on the list. It appears that much of the process was conducted without using consensus development techniques.

Second, in addition to the lack of consensus building, many participants mentioned difficulty with the quality of the final scientific decisions. Many felt politics entered into the decisions much more than it should have, and there were complaints that "good" science was not used to make these important decisions. There is considerable doubt about whether the program will ultimately protect the endangered species at all. Correspondingly, some participants questioned whether the agreement was even a true management plan. The implementation plan does not contain many action items, and represents only a list of what the various technical groups put forward, with no sense of priority for the various items. While the implementation plan has been successful in funding a great deal of research, many feel the research debate is mistakenly focused on who gets funded for what projects, rather than the best way to protect or maintain endangered species habitat.

Finally, many participants echoed the general feeling that the recovery plan was developed very quickly, with the goal being to reach agreement—any agreement. Many agreed that FWS Director Dunkle had pushed hard for a "success story" and gave considerable institutional and financial support to the effort. However, there was not a corresponding amount of effort applied towards implementation of the agreement, or thought about whether the agreement would actually meet the parties' responsibilities and goals. So, one of the difficulties the parties face is trying to implement a plan of questionable scientific quality.

In sum, because of these difficulties with the process, a variety of problems administering and implementing the program were encountered. The problems resulted in

a reorganization of the program; several of the advisory committees were abolished and new members were added to some of the technical groups. This reorganization included an effort to develop a strong technical advisory group that would use "good" science in making recommendations and decisions.

Events Following the Program Reorganization

Since the completion of the final program for fish recovery in September 1987 and the subsequent execution of the cooperative agreement in January 1988, the FWS, in cooperation with program participants, has proceeded with its efforts towards fish recovery. These efforts have been guided by the five elements delineated in the 1987 recovery program. However, over the first five years of implementation controversies arose requiring major additions and modifications to the recovery program. The first issue that emerged requiring attention was related to Section 7 consultations. The original agreement had not resolved procedures for water development projects needing some additional permit; for example, to renew a federal right-of-way or license. Consequently, the FWS treated those permit applications as if they were for new projects and applied depletion charges. Water development interests argued that projects already in existence should not be subject to depletion charges. A second difficulty concerned the effectiveness of the recovery program. The environmental interests argued that the program as it existed did not produce sufficient progress towards fish recovery. According to Robert Wigington of The Nature Conservancy:

Since the start-up of the Recovery Program in 1988, the FWS has issued no-jeopardy opinions for 93 water projects with the potential to deplete 168,545 acre feet. Only five of those exceeded the 3,000 acre foot threshold, and three out of those five were Bureau of Reclamation projects.

Under the so-called Windy Gap approach which preceded the Recovery Program, it was enough to pay a \$10 per acre foot depletion charge, without making progress on the legal protection of instream flows or other more direct recovery actions. (Wigington, 1993, p. 2)

Environmental groups wanted a way to hold the program accountable without allowing water developers to "pay to play."

The Management Committee responded to both of these issues. Since 1984, the organization of the program had undergone several modifications. The Implementation Committee, created in 1988, remains the top decision-making body, meeting about once a year. The Management Committee is the next level of decision-making; it is responsible for addressing new issues and problems with the program as they arise during implementation. By 1992, the Management Committee was assisted in its efforts by three technical committees: Biology, Water Acquisition, and Information and Education. The Management Committee responded to the two issues of concern with the development of

a two-part corollary agreement to the Recovery Implementation Program. This agreement was released in draft form on September 3, 1993 and the public comment period closed on October 4, 1993. Until the agreement is finalized, the FWS is operating under the draft plan.

The Agreement

The first part of this agreement is called "Section 7 Consultations, Sufficient Progress, and Historic Projects." It creates a "framework for conducting Section 7 consultations on depletion impacts related to new projects and impacts associated with historic projects" (Draft, p. 2). The second part of the agreement is called the "Recovery Implementation Program Recovery Action Plan," or RIPRAP. RIPRAP contains detailed descriptions of the specific action items needed to recover the fish in both the Colorado and Green Rivers and their subbasins. RIPRAP relates to the Section 7 consultation agreement because it:

Identifies specific actions and timeframes currently believed to be required to recover the endangered species...[and] serve[s] as a measure of accomplishment so that the Recovery Program can continue to serve as the reasonable and prudent alternative to avoid the likelihood of jeopardy to the continued existence of the endangered fishes for projects undergoing Section 7 consultation (FWS, 1993, Preface).

RIPRAP creates a program the FWS can use to determine whether enough progress towards recovery has occurred to allow water projects to proceed under Section 7, rather than use the traditional method requiring the developers themselves to offset harm to the fish. The Section 7 agreement will not be effective until the Implementation Committee adopts the RIPRAP by consensus.

Section 7 Consultations, Sufficient Progress, and Historic Projects and RIPRAP

Specifically, the Section 7 consultation agreement contains several new policies and clarifications in thirteen separate points, of which the following are highlights.

- 1) Historic projects that have increased their depletions since January 22, 1988 will be subject to a depletion charge. But depletion charges will not be applied to historic projects that undergo future Section 7 consultations.
- 2) If sufficient progress³ towards fish recovery is not being achieved, the FWS will write biological opinions for new and historic projects to identify the actions in the RIPRAP needed to avoid jeopardy.

³ Sufficient Progress is defined as contributing to "a measurable population response, a measurable improvement in habitat for the fishes, legal protection of flows needed for recovery, or a reduction in the threat of immediate extinction" (Draft, p. 3).

- 3) Regarding historic projects, RIPRAP actions will be the reasonable and prudent alternatives if completed according to the stated timeframe. With new projects, RIPRAP actions will be the reasonable and prudent alternatives if they are finished before the project's impact occurs.

The bulk of RIPRAP is composed of seven detailed recovery action plans for the Colorado and Green Rivers and their subbasins. There is also a general recovery support action plan. The action plans are organized by tasks related to each of the five original recovery elements plus two new areas. These elements are:

- 1) Protect instream flows.
- 2) Restore habitat.
- 3) Reduce negative impacts of nonnative fishes and sportfish management activities.
- 4) Conserve genetic integrity and augment or restore populations.
- 5) Monitor populations and habitat and conduct research to support recovery actions.
- 6) Increase public awareness and support for the endangered fishes and the Recovery Program.
- 7) Provide program planning and support.

Each plan highlights, and gives priority to, those actions most important to fish recovery. The significance of RIPRAP is its attention to detail; each recovery action plan is summarized in a grid with actions organized by recovery element. An activity is listed, its status given, and its target completion date identified. Each general action is supported by specific implementation steps needed to achieve recovery. The actions in these plans, when completed, should result in sufficient progress, which will ultimately be fish recovery. RIPRAP will avoid jeopardy opinions by providing a reasonable and prudent alternative in the form of progress on the specific actions needed to recover the fishes. Additionally, the new agreement provides the details all parties need for long-term planning.

Funding

It remains essential for program success to maintain current, and secure additional, funding sources. The RIPRAP contains a ten-year schedule of the estimated costs of recovery actions. The following table summarizes the estimated amount, likely source, and planned uses for funding.

USE	SOURCE	AMOUNT
1) Operating Budget	The Bureau, FWS, CO, UT, and WY	\$2.7 million/year
2) Refugia and Hatchery Facilities	The Bureau, FWS, CO, UT, and WY	\$500,000/year
3) Water Rights Acquisition for Instream Flows	Congress	\$18-50 million/10 years
5) Construction Projects	Congress	\$32-50 million/10 years
6) General	Water depletion fees	\$1-2 million/10 years

Since the release of the draft corollary agreement, efforts have begun to secure the funding necessary to carry-out the action items. The Bureau is beginning a concerted effort to gain capital funding from Congress, particularly for the construction of passageways and the restoration of flooded bottomlands. Said Angela Kantola, the FWS Recovery Program Assistant, "bucks will be a big part of this." She suggested that the program has the support necessary in Washington D.C. but it still may not equate to a lot of dollars. Tom Pitts, a consultant representing the interests of water users in the three states, added that the program will provide Congress with an opportunity to support this type of program. He said "the phase we're entering is going to put Congress to the test for these kind of problem-solving efforts. Time will tell." Pitts said the non-federal parties will be working to secure funding through lobbying efforts as well as the efforts of state Congressional delegations. Robert Wigington of The Nature Conservancy said the benefit of this funding schedule was not clear to the environmental participants. He believes the estimated \$100 million being requested from Congress is inflated and suggested a more accurate amount would be \$20 million. Wigington is comfortable with spending money for bottomland restoration but believes site selection needs to be more systematic and the inventory of sites increased. Regarding refugia, he argued that the idea of propagating the fish far into the future is inconsistent with the goal of long-term fish recovery and the establishment of self-sustaining fish populations.

Current Progress

Habitat Restoration

An ongoing project to help recover fish habitat is the restoration of flooded bottomlands. As of 1993, five sites had been identified for potential restoration. Recovering flooded bottomlands, highly nutritional waters used by young fish for rapid growth before feeding for themselves in the river, requires the removal of selected dikes and levees. Implementation of construction activities are planned to begin during the 1996 fiscal year. Several other projects to help the fish have also been planned. In 1995, construction will begin on a fish ladder for the Redlands Diversion Dam, a fifty-mile stretch of fish habitat on the lower Gunnison River. Also in 1995, construction will begin on fish passageways around agricultural diversion structures on the Yampa and Colorado Rivers.

Hatcheries and Stocking

The FWS is proceeding cautiously with the hatching and stocking of the endangered fishes; two attempts to reintroduce Squawfish in the White and Colorado Rivers in the 1980's failed because of inappropriate habitat and the fact that the fish were not big enough to survive. In 1994, the FWS plans to begin a small-scale experimental reintroduction. About 10-20 fish, equipped with radio transmitters, will be released into three targeted streams, including stretches of the Grand Valley and Gunnison Rivers. Reintroduction efforts are focused on the Razorback Sucker because it is the second most threatened; only very old fish (40 years) have been found, suggesting problems with juvenile survival. Because the Bonytail Chub is extinct in the upper basin, the FWS knows less about how to proceed with restoring that population. However, an experimental Bonytail Chub reintroduction is planned for 1995 in the Colorado River. For FY 94, the FWS received \$970,000 and the Bureau received \$875,000 for further expansion of the hatchery facility at Ouray, UT. The FWS works closely with the states, especially Colorado, to achieve progress on the fish augmentation program.

Instream Flow Acquisition

Regarding instream flow protection, several dam operations are undergoing modifications to recover the fish. Major operational changes have occurred on the Flaming Gorge Dam on the Green River. In 1992, the FWS sent a draft biological opinion to the Bureau of Reclamation recommending modification of the dam's releases to change flow and temperature regimes. For its opinion, the FWS used data the Bureau had collected through testing different flow operations on Flaming Gorge since 1985. The Bureau adopted the recommendations in the 1992 biological opinion and the effects of these changes will be studied over the next five years. In 1997, the FWS will release another biological opinion on the effectiveness of Flaming Gorge's operational changes. Through discussions among the FWS, the Bureau, and WAPA, this second biological opinion will determine what further refinement of winter and spring releases is needed.

In May 1992, in addition to the Flaming Gorge modifications, the Bureau began releasing flows from the Blue Mesa, Narrow Point, and Crystal Dams on the Gunnison River. Not as much data exists for these dams, known as the Aspinall Units, as it does for Flaming Gorge. Therefore, the effects of the new releases will be studied for five years with the Bureau and WAPA providing the necessary information. The goal is to discover how much water the fish need. The FWS plans to release a biological opinion based on the new data in 1997. Besides changing dam operations to increase instream flows, water is also released from the Reudi Reservoir on the Frying Pan River to augment flows on the Colorado River. The Colorado Water Conservation Board is working with the FWS and the Bureau to help increase flows in that area.

Acquisition of instream flows remains one of the most controversial aspects of the program. It is difficult to accurately determine how much water the fish actually need and this is further complicated by arguments over methodologies. Two opposing perspectives

are brought to the table—natural history and engineering. The biologists argue that the fish cannot have too much water because it is best for the system if no water is developed at all. Therefore, the more instream flows acquired, the better. In contrast, the engineering perspective reduces the issue to a formula of x water quantity equals y pounds of fish. Wigington said this question of how much water is needed is a real “stumbling block.” The environmental interests are concerned that when they inform the parties of the water needed, so the states can begin to protect flows, the states will decide the amount of water is not really needed and will therefore fail to protect flows. No water has yet been protected by the states because of this impasse.

Several efforts have been made to overcome this predicament. Dr. Jack Stanford, a researcher at the Flathead Biological Station in Montana was asked to review the data and issue an independent judgment on whether the FWS has a strong basis for its flow recommendations. In his June 1993 draft report titled “Instream Flows to Assist Recovery of Endangered Fishes of the Upper Colorado River System: Review of Synthesis and Ecological Information, Issues, Methods, and Rationale,” Dr. Stanford basically stated the FWS had a good basis for its flow recommendations but it could be improved, possibly through an ecosystem approach. However, it is probably more difficult to quantify the necessary amount of instream flows on a larger ecosystem basis; the data will be that much more complicated. The second effort to secure instream flows is an attempt to adapt state water policies and laws on instream flows so they are responsive to the FWS’s flow recommendations. This effort, instigated and pushed by Wigington, resulted in the idea to split Colorado’s acceptance of instream flow recommendations into two levels.

One level of state acceptance will be for protection without any special qualification. The other level will be for legal protection that is periodically reviewable and expressly subject to later modification by the state. [This] enables the legal protection of flows to proceed despite different uncertainties about the scientific basis for the FWS recommendations and about water availability or compact allocations (Wigington, 1993, pp. 8-9).

Wigington, when interviewed in October 1993, said this approach was on the verge of being institutionalized. The reason he strongly supports this approach is because it involves protecting flows now, even though they are subject to future review if necessary. But he is counting on a certain amount of inertia once flows are protected so reviews of protection will be the exception, not the rule.

Attitudes Towards the Program

Both environmental and water interests agreed that the accomplishments of the program are largely due to participant commitment. Pitts said there has been a “great deal of good faith” with participants keeping their funding and regulatory commitments as well as the commitment by all to support the program publicly and politically. Wigington

said "we've been pretty consistent...as consistent as Tom [Pitts]." He said he would give both the environmental groups and Pitts credit for the success to date; Pitts in particular committed the water development community to this approach from the beginning. Wigington generally believes the right personalities have been involved in this process—in addition to Pitts, he points to the Directors of Colorado's Natural Resources Department, who really committed Colorado to this effort. Also, he sees that good leadership in the FWS and a sincere effort by the Bureau to change its operations contributed significantly to the program's success. Concluded Wigington, it was a "fortunate confluence." In addition to the benefits of good group dynamics, Pitts said an important aspect of the program was the establishment of a forum to resolve issues. Wigington added that participants are now accessible and accountable—meaning they have to "show up and be consistent." This accessibility and accountability forces the group to resolve issues, which, Wigington feels, is better than being in court.

Despite positive outcomes, participation is still difficult. Regarding relationships among participants Pitts said "there is still some tension in the program...not all warm and cozy by any means." Wigington concurred, saying the group sometimes encounters frustrating stalemates. Pitts said the issues of instream flow recommendations and methodologies, and non-native fish stocking remain controversial. For Wigington and The Nature Conservancy, there is still the difficulty of determining whether the program is actually effective in fish recovery. He also emphasized the fact that such a cooperative effort is expensive; it is slow-moving, there is a lot of bureaucracy, and the process is probably not cheaper than litigation. Overall, "it requires some stamina" of all participants. He said "I think it's a hard thing to sustain. You don't have the emotional confrontations that sometimes catch the headlines and catch the funding." Wigington reiterated that the process is not a panacea and costs must be recognized before embarking on such an effort because participation "requires long-term commitment." Additionally, he noted that complications arise when a process spans more than one political administration, which is almost guaranteed to occur. The effect new administrations have on agency priorities and congressional funding exacerbates the difficulties of a long-term cooperative process.

Most participants believe that as difficult and problematic as the recovery negotiation process and program have been, it was the only way to proceed to have a chance of recovering the fish. Tom Pitts said there would be no successful program today without having had the negotiations; if the issues had traveled through traditional administrative and judicial channels instead, the result would have been a "black and white answer" without a recognition of the issues' uncertainties. He added, "I feel that we're learning as we go and learning to do things better." Given what was known going into the process, Pitts said he was satisfied but would still like to see the program and the process improved. Angela Kantola of the FWS does not believe the program can be considered a success until the fish have recovered, but when asked if the program would have been possible without a collaborative effort she answered, "no way." Kantola believes that without the negotiations that began in 1984, "the fish would probably be in a lot worse shape." Similarly, in response to this question Robert Wigington of The

Nature Conservancy answered "my own instincts are...no. Just a bunch of fighting, not much recovery, and a lot of wasted effort." Wigington said positive program accomplishments to date include: 1) the development of the two-tiered approach to instream flow rights in Colorado, 2) the improved resolution of Section 7 consultations and progress on the RAP, and 3) progress made on the reoperation of Flaming Gorge. Although difficulties and doubts remain, these achievements, and the hope of future achievements, keeps The Nature Conservancy "fairly optimistic about the program."

Conclusion

The genesis for the development of the Upper Colorado River Recovery Implementation Plan was uncertainty about the impact of water diversions on endangered fish species; the status and needs of these endangered fish; and the likely outcome for any group if other legal or administrative channels were used for decision-making. Additionally, the FWS realized that to truly protect the species, rather than use an outdated project-by-project approach, a comprehensive view of both the river ecosystem and its potential future water diversions was necessary. Hence, the incentives and needs of the parties deemed that a comprehensive and collaborative fact-finding and planning process was the logical and strategic next-step.

Regardless of how obvious and practical the choice to collaborate and negotiate was for all parties, the process itself could not guarantee success. First, the nature of the problem involved considerable scientific uncertainty. At the outset of the process very little was known about these endangered fishes and, while the process without question generated additional information and contributed to an understanding of the situation, it could still not answer key questions with certainty. Furthermore, political realities drove the process of scientific inquiry. Decisions had to be made without clear scientific direction. The result, not surprisingly, was a plan consisting of wish-lists and proposals without priorities or specific action items. Second, the process itself hindered the effectiveness of the effort. While political and financial support was considerable, process facilitation was weak. The process did not seem to be guided by consensus, either because of an inability or unwillingness to compromise, or because the facilitation skills that could effectively drive a consensus process were lacking. In the end it was evident that some parties were not represented, in particular the State of New Mexico.

Additionally, the wary participation of environmental interests threatened the viability of the consensus process in its early stages. While these groups could not, strategically, refuse to participate, they were afraid their participation might ultimately legitimize further water diversions. However, because the humpback chub, bonytail, squawfish, and razorback sucker are not charismatic species that can generate broad public support, these groups realized that perhaps the best they could do to potentially recover the species was negotiate. Consequently, their participation was cautious, in many ways with one foot in the door and one foot out; it was necessary to be there to

understand what was happening and hopefully to influence the outcome, but it was risky if their presence simultaneously sanctioned development.

Much work remains to be done before the Upper Colorado River Basin teems with healthy, self-sustaining populations of Humpback Chub, Bonytail Chub, Razorback Sucker, and Colorado Squawfish. The original span of the plan was fifteen years, until the year 2003. But it will take much longer than that for the fish to successfully recover, and participants believe the program will have to continue well after that time. As Angela Kantola of the FWS says, "it takes a long, long time to accomplish these things." However, because there are so many issues involved in recovery, nothing could be done without cooperation among the varied interests--the states have water rights, the Bureau operates many dams, the FWS is responsible for administering the Endangered Species Act, environmental groups want to protect the fish, and private water interests want to protect water depletion rights. While this is a simplistic summary, it shows the necessity of cooperation; however many difficulties participants have had to overcome and continue to face in this effort, there is also accord among them that in this case, the decision to cooperate was the right one.

In the end, while the path has been uncertain and rocky from the start, all involved agree that it was nonetheless the appropriate path to be taking. While eventual recovery of the species is still not a certainty, its likelihood is much greater than if the parties were meeting across a courtroom instead of a conference room. Moreover, their united efforts have fostered the political concurrence necessary to bring funds, other resources and support to the effort, at least giving the species a chance at recovery.

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CASE STUDY #2

PLATTE RIVER MANAGEMENT JOINT STUDY¹

Introduction

“Whiskey’s for drinking and water’s for fighting,” goes an old western saying that still holds true today. Fights over water rights may now take place in courtrooms instead of smoke filled bar rooms, but nevertheless the fight goes on to determine who will gain control and reap the benefits of water in the west. Since 1967, the Platte River Basin in Colorado, Wyoming, and Nebraska has been the scene of continued and often intense controversy between conservationists and water development interests. The theme of the conflict is a common one in the arid west: an ongoing struggle between a conservation community that wants water left in the river to benefit wildlife versus a development community that wishes to divert water to meet growing agricultural and municipal needs (Shoemaker 1988).

The focus of this case is a controversy involving a 225-mile stretch of the North Platte and Platte Rivers, between the towns of Sutherland and Duncan, Nebraska. Of special concern is the 80-mile Big Bend segment between Overton and Chapman. While more than 240 bird species have been recorded on the Platte, the Big Bend is especially valued as habitat for a variety of species dependent upon the natural river system with its open waters, exposed sandbars, and adjacent wetlands. These species include the endangered whooping crane (Fed. Reg. 32:4001), least tern (Fed. Reg. 50[102]:21784-21792), and bald eagle (Fed. Reg. 43[31]:6230-6233); the threatened piping plover (Fed. Reg. 49[218]:44712-44715); four-fifths of the world population of sandhill cranes; over seven million ducks and geese; and hundreds of other bird species. A 54-mile section of the Big Bend, from Lexington to Denman, has been designated critical habitat for the whooping crane by the U.S. Fish and Wildlife Service (FWS) (Shoemaker 1988).

At issue is the cumulative effect of past and future water development on habitats used by these species. The Platte is typically described as a river that is being drained dry. Water developers have diverted 70 percent of the river’s flow and now they are grasping for the remaining 30 percent (Winckler 1989). The Platte and its tributaries have been manipulated to provide water for agriculture, power generation, and domestic and industrial uses since 1838. The conversion of prairie to cropland along the Big Bend stretch of the Platte River, and along the North Platte River, was essentially complete by 1911 (Currier et al. 1985). Today, the principal land use in the valley is agricultural;

¹ This case study was developed by Laurel Horne, Clare Ryan and Rachel Selk.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

primarily the raising of corn, milo, hogs and cattle (Currier et al. 1985). As stream flows were reduced and sediment caught behind dams, riparian woodlands grew up in the shrunken remnant of the formerly two mile wide river channel.

The Platte River begins as two separate snowmelt runoff streams high in the Colorado Rockies. On its 665 mile journey, the North Platte arcs northward through Wyoming, and then near Casper begins its descent eastward to Nebraska. The 450 mile long South Platte passes near Denver and through the eastern plains of Colorado before heading north where it meets the North Platte near the town of North Platte, Nebraska. The Platte then continues east for 310 miles, creating what is known as the Big Bend region as it dips south and then north, until it merges with the Missouri River, just south of Omaha.

Precipitation in the Platte River basin contributes to the flow of the river but most of the flow is derived from spring (May-June) runoff from the Rocky Mountains. The pattern of streamflow in the Platte has been substantially altered by the diversion and storage of water, primarily for use in irrigation and power generation. Before settlement, the river was characterized by high spring and relatively low mid-summer flows. The construction of large on-stream reservoirs in Wyoming and Nebraska has resulted in a reduction in peak flows and mean annual discharge in the North Platte and Platte Rivers. Since 1915, peak flows have declined from an average of 19,400 cubic feet per second (cfs) to an average of 5,300 cfs. Annual flow during the same period of record declined from 2.8 million acre-feet annually, to 800,000 acre-feet. Corresponding to this decline in average annual discharge has been a reduction in the width of the Platte River channel. Today the river channel is 10 to 70 percent of its width at the time of settlement in the 1860's (Currier et al. 1985). Almost 1.4 million acre-feet of water is delivered each year to farmers in the North Platte Valley to irrigate 325,000 acres of land. The oldest dam on the North Platte, Pathfinder, was built between 1905 and 1910 to store water to irrigate land in Wyoming and Nebraska.

Conservationists contend that further depletions in flow will destroy what is left of the river's remarkable migratory bird habitat; developers say the birds can move elsewhere. In addition, conservationists believe that new water developments will result in further habitat deterioration which would diminish survival prospects for all the threatened and endangered species, and reduce waterfowl and sandhill crane populations. In their view, new water developments should not be permitted until the instream flow levels needed to sustain the Platte's habitats have been quantified and legally guaranteed. In contrast, water development interests contend that additional reservoirs and diversion projects are necessary; failure to develop additional water supplies, they maintain, endangers the economic well-being of Colorado, Wyoming, and Nebraska (Shoemaker 1988).

South Platte River water is allocated between Nebraska and Colorado through the South Platte compact signed in 1923. The compact bars Nebraska from interceding in Colorado water resource development in the South Platte. During the Dust Bowl years,

Nebraska and Wyoming got into a lengthy struggle over the North Platte River and “the heart of that controversy was whether upstream junior appropriators in Wyoming and Colorado were wrongfully depriving senior appropriators in Nebraska of North Platte waters” (Olpin 1989). After eleven years of litigation involving Colorado, Wyoming, Nebraska, and the United States, the dispute reached the U.S. Supreme Court, which established a set of guidelines for Nebraska and Wyoming to follow.

Codified in 1945 as the North Platte Decree, these strictures included such guidelines as when and how the string of reservoirs on the North Platte would be filled and how natural flows on the river would be allocated between Nebraska and Wyoming. Known as “the Decree,” its highlights are that it “recognizes some priorities across state lines, protects established Wyoming and Nebraska uses against certain further Colorado developments, and in turn protects established Nebraska uses against certain further Wyoming developments” (Olpin 1989). The Decree’s most important component was its allocation of waters in the North Platte mainstem between Guernsey Dam in Wyoming and the Tri-State Diversion Dam, just downstream of the Wyoming-Nebraska state line. During the irrigation season (May 1 to September 30), the natural flows in this region of the mainstem are apportioned 75 percent to Nebraska and 25 percent to Wyoming. The Decree also contained a “changed conditions” or “reopener” clause for which the court retains jurisdiction (Olpin 1989).

History of Platte River Water Development Conflicts

Today, environmentalists, water developers, and farmers in the Platte Valley are engaged in several water project negotiations that on paper have all the signs of hopeful and productive cooperation. In reality, negotiations are proceeding fitfully in an aura of distrust and outright sullenness, largely because many people in the Platte Valley continue to harbor bad feelings about environmental efforts in the 1970’s to protect the Platte. One of these efforts was an abortive attempt by the FWS in 1973 to establish a wildlife refuge on the Platte River in the vicinity of Grand Island. John VanDerwalker, who was working at the time for the FWS in Denver, and later became the director of the Platte River Whooping Crane Trust, said “it all happened because two million dollars was left over at the end of the year, and Nat Reed (then the Assistant Secretary of the Interior for Fish, Wildlife and Parks) wanted to see a refuge on the Platte River.” VanDerwalker paraphrased the letter sent out by the Fish and Wildlife Service to landowners along the Platte and to Governor James Exon: “In effect it said: ‘we’re gonna build a refuge and we want your land, and if you won’t sell it to us we’ll condemn it.’” Chuck Frith, now a National Audubon Society consultant, was working for the Bureau of Reclamation at the time. He recalled the reaction: “Things really blew up. People around here are still very hot about it sixteen years later” (Winckler 1989).

In addition to the conflict over the refuge, several water development projects have also set the stage for the current controversy:

The Mid-State Reclamation Project

The conflict between water development and wildlife interests on the Platte began in earnest in 1967 when Congress authorized federal participation in the Nebraska Mid-State Reclamation project. The Bureau of Reclamation proposal would have diverted more than 50 percent of the remaining streamflow in central Nebraska to irrigate 140,000 acres. The FWS opposed the project unless it was modified to guarantee specific instream flows to maintain whooping crane, sandhill crane, and waterfowl habitat. Project proponents rejected this alternative, resulting in a prolonged controversy. The project was finally defeated in a local referendum in 1975 (Shoemaker 1988).

The Grayrocks Dam Project

During 1978, controversy erupted over the Grayrocks Dam and Reservoir proposed for the Laramie River, a tributary of the North Platte in Wyoming. The dam and reservoir projects were components of the \$1.6 billion Missouri Basin Power Project. The state of Nebraska, National Wildlife Federation, National Audubon Society, and Nebraska Wildlife Federation sued the federal Rural Electrification Administration and the Army Corps of Engineers (the Corps), contending, in part, that these agencies failed to properly consider the impacts of the project on whooping crane critical habitat in Nebraska. The court ruled that the Rural Electrification Administration had failed to prepare an adequate environmental impact statement and had also failed to comply with Section 7 of the Endangered Species Act, which requires federal agencies to consult with the FWS regarding potential effects of their projects on endangered species.

The controversy was settled by an innovative and complex agreement in December 1979. While the dam was allowed to proceed, the agreement restricted the amount of water it could use and required the project sponsors to establish a \$7.5 million trust fund for use in monitoring and maintaining whooping crane habitat. The money was used to fund the Platte River Whooping Crane Habitat Maintenance Trust, a nonprofit organization that is now devoted to the conservation of migratory bird habitat on the Platte (Shoemaker 1988).

The Wildcat Project

The Wildcat project extended the controversy to the South Platte River in Colorado. The Riverside Irrigation District and Public Service Company of Colorado proposed a joint project to develop a 60,000 acre-foot reservoir to supply cooling water for Public Service's Pawnee Power Plant as well as supplemental irrigation water. The Corps denied an application for a 404 permit for the project after the FWS issued a jeopardy opinion in 1982. The FWS had concluded that the flow depletions resulting from the project would jeopardize the continued existence of the whooping crane and adversely modify the species' critical habitat. In its biological opinion, the FWS recommended these impacts be avoided either by guaranteeing flow releases during certain times of the year or by managing habitat for whooping cranes in Nebraska.

Project sponsors rejected these alternatives and challenged the Corps' decision. The court upheld the Corps' decision per the Endangered Species Act review requirements for the 404 permit process. These decisions have delayed the project indefinitely. The Public Service Company of Colorado subsequently obtained cooling water from existing diversion sources on the South Platte. However, project sponsors said they might still pursue a Wildcat Creek water development project in the future (Shoemaker 1988).

The Catherland Project

The Catherland Project appears to be dead, but it had profound effects on the course of all other water projects in Nebraska. Catherland would have transferred 120,500 acre-feet of water annually from the Platte River to a reservoir on the Little Blue River and then parceled it out to irrigate 66,500 acres of corn and soybean fields in southern Nebraska. The case was significant because prior to the Catherland proposal it was illegal in Nebraska to transfer water from one basin to another, which Catherland would have done. In 1980, however, the Nebraska Supreme Court ruled that interbasin transfers were legal. This ruling sent a signal to Nebraska irrigators that the time was right to grab the last unappropriated water out of the Platte.

Enthusiasm for development was restrained somewhat in 1982 by the decision in *Little Blue Natural Resources District v. Lower Platte North Natural Resources District* ("Little Blue II"). In this case, the Nebraska Supreme Court ruled that water appropriations were subject to the Nebraska Nongame and Endangered Species Conservation Act (NESCA). The court ruled that interbasin transfers could not be approved by the Nebraska Department of Water Resources until it had consulted with Nebraska Game and Parks Commission regarding whether the proposed water transfers would interfere with endangered wildlife species or designated critical habitat. This forced the water development community to realize that Nebraska irrigation projects were subject to state and federal environmental laws.

This decision provided environmentalists, after fighting the Catherland project for eleven years, with a limited legal victory. In late 1988 the Nebraska Supreme Court, which had reviewed the case on four previous occasions, rejected the water developers' application on the narrow and absolute grounds that the Director of the Nebraska Department of Water Resources erred when he granted a transfer of the water right application from one entity (the Little Blue Natural Resources District) to another (the Catherland Reclamation District) (Winckler 1989). Even if Catherland had won in the courts, the project probably would never have been built. Its backers had no money, and it was unlikely that the federal government would have appropriated the estimated \$82 million needed to build it (Winckler 1989).

Prairie Bend Project

This project proposed that the water that reenters the Platte at the J-2 return be appropriated. This meant that the last "free" water remaining in the river, water that

helped keep the Big Bend of the Platte from degrading at the same pace as westerly stretches of the river, would be removed. Prairie Bend was a Bureau of Reclamation project, estimated to cost \$200 million. This project was unique because it embraced the idea that certain wildlife needs must be met along the Big Bend of the Platte. The project included: construction of Plum Creek reservoir, application to the state for an instream water right, and the purchase of three large areas along the Platte (a total of some 14,000 acres) for a federal wildlife refuge (Winckler 1989).

During 1989, the chief proponent of Prairie Bend, the Central Platte Natural Resources District (which serves irrigators in counties to the north of the Big Bend region) mounted an elaborate campaign for much lower instream flows—virtually half the amount recommended by the Game and Parks Commission. This angered environmentalists in the Platte Valley. All evidence indicated that this project would involve a prolonged and unpleasant fight between water developers, irrigators and environmentalists (Winckler 1989).

Deer Creek Project

This project proposed building a storage reservoir on Deer Creek, a tributary that enters the North Platte River between the Pathfinder and Guernsey Reservoirs, downstream of Casper, Wyoming. It was sponsored by the Wyoming Water Development Commission, and its purpose was to meet municipal water needs in Casper, Wyoming, and other smaller municipalities in Wyoming below Alcova Reservoir but upstream of the mouth of Deer Creek by exchange. Wyoming estimated that the Deer Creek Reservoir would store approximately 66,000 acre feet of water, with an annual yield for consumptive use of 6,400 to 9,600 acre feet.

On October 6, 1986, in opposition to the Deer Creek project (and other water project construction and operations on the Laramie and North Platte Rivers) the state of Nebraska petitioned the Supreme Court to enforce the 1945 Decree which had allocated the waters of the North Platte among Colorado, Wyoming, and Nebraska. In the petition, Nebraska argued that “Wyoming unlawfully is depleting and threatening to deplete the flows of the North Platte River” in four ways, one of which was by the proposed Deer Creek construction (Olpin 1989). Nebraska’s concern was that the project would not allow the water to be apportioned equitably among the states according to the Decree.

At first Nebraska did not identify protection of the Big Bend as the reason the court should allow more water to flow into the state. That failure prompted four conservation organizations—National Audubon Society, Sierra Club, Nebraska Wildlife Federation, and the Platte River Whooping Crane Habitat Maintenance Trust—to seek intervention in the case on behalf of the whooping crane and other migratory birds. Although the court refused to allow the conservation groups full status as intervenors, it has allowed them to participate as “*super amici curiae*,” with opportunity to present evidence and cross-examine witnesses (Meyer 1989). The conservation groups urged the

court to revamp the Decree and allocate water specifically to protect wildlife habitat in Nebraska, as well as for irrigation and municipal use.

In January 1988, Nebraska sought to amend its petition to clearly identify the importance of maintaining flows for critical habitat, but the court denied the motion to amend. A special master was appointed to oversee discussions between the parties, and the case was not expected to reach the Supreme Court for another six to seven years (Zallen 1990). Even though, in December 1987, the Corps issued a permit under section 404 for Deer Creek's construction, construction has been halted since the petition was filed. As of 1993, the U.S. Supreme Court had ruled on two issues in the petition, one of which was that the panhandle water district in Nebraska does have a 1904 water right. However, five remaining issues were remanded for trial. The case is expected to last another five or six years, during which time it will remain difficult for Nebraska and Wyoming to meet non-adversarily.

The Platte River Management Joint Study

Background

The result of these past conflicts on the Platte was essentially a stalemate between wildlife and water development interests. New water projects have not been allowed to proceed without first implementing alternatives that would offset the effects of flow depletions. Development proponents have consistently rejected these alternatives and instead delayed their projects. Although additional streamflow depletions have not yet occurred from new projects, conservationists have made virtually no progress toward their goal of legally protecting instream flows in the Platte River (Shoemaker 1988).

An effort to break this stalemate emerged as a result of the Bureau of Reclamation's proposed Narrows Unit on the South Platte in eastern Colorado. This proposal was for a \$377 million, 1.1 million acre-foot reservoir, the principal purpose of which was to supply irrigation water to 287,000 acres of land. In 1983, the FWS issued a biological opinion that concluded that projected streamflow depletions would jeopardize the continued existence of the whooping crane and adversely modify its critical habitat. The Service recommended that the proposed operation of the project be modified to provide water releases to maintain specified instream flows in central Nebraska. The Bureau of Reclamation rejected this alternative. Faced with an impasse, on March 25, 1983 the regional directors of the FWS and the Bureau of Reclamation agreed to establish the Platte River Management Joint Study (PRMJS), a study intended to develop other alternatives to allow the project to proceed without adversely affecting whooping crane habitat.

The original purpose of the Platte River Management Joint Study was to find a means by which the jeopardy opinion for the Narrows Unit project under section 7 of ESA could be removed. In addition, water development interests were slowly coming to the realization that they must follow environmental laws. David Bowman of the FWS in

Nebraska, explained his perception of water development incentives to initiate and participate in the process:

Water interests perceived that this was not the first time they'd had difficulty surmounting section 7. They realized a mechanism had to be found to 'accommodate' the Endangered Species Act. So, water development interests petitioned the Secretary of the Interior, who told the Fish and Wildlife Service and the Bureau of Reclamation to work out a consensus resolution (1990).

While the original incentive for water interests to participate was securing approval for the Narrows Unit project, support for that project waned. However, these parties continue to be interested in other water development projects (Strom, 1990).

The environmental community had mixed feelings about participation in this study. Ken Strom, manager of Audubon's Lillian Annette Rowe Wildlife Sanctuary, explained his doubts:

We are constantly asking ourselves the question: Is it worth our time and money to participate? We want an outcome that is a legitimate scientific outcome and one that will not be challenged in court. Much of our early internal debate focused on the fact that simply by participating we were adding legitimacy to the process and we weren't sure if we wanted to do this. We thought about letting them go ahead and then attacking the outcome legally, but realized we can't afford to fight this dam by dam. There was also great potential damage by not participating, in terms of what would be developed if we were not there (1990).

In spite of their fears and discomfort, neither side of the conflict was willing to accept a continuing impasse that prevented further water development in the basin and failed to protect the essential habitats of the central Platte. As a result, both wildlife and water interests participated in this program to find a mutually agreeable plan for resolving the conflict.

Goals

Although the joint study began in 1983 as a cooperative effort by the FWS and the Bureau of Reclamation to accommodate both the Narrows project and the whooping crane, the potential for conflicts with other species and other development proposals led to the program's expansion in 1985. The Bureau of Reclamation and the FWS remained the lead agencies, but representatives from many groups with a stake in the Platte River Basin participated in the study including: the states of Nebraska, Wyoming, and Colorado; the Corps and other federal agencies; water development interests; and the environmental community (Shoemaker 1988).

The new, broader goals of the study were to develop a land and water management plan that would: (1) allow additional water development to proceed in compliance with the protective requirements of the Endangered Species Act, and (2) assure adequate habitat for the endangered, threatened, and other migratory bird species that depend on the Platte, without conflicting with existing water laws (Shoemaker 1989). Objectives of the management plan were to be developed in two phases. Phase One involved alternatives to remove the jeopardy opinion for the proposed Narrows Unit in Colorado, pursuant to the Endangered Species Act. Phase Two involved addressing the habitat needs of nonlisted migratory birds and resident species which use the Platte River habitats. Authority to undertake this effort was provided in the congressional authorization of a feasibility study for the proposed Prairie Bend Unit in Nebraska (PRMJS 1988). The study was meant to be a detailed and technical plan for management of the Platte, especially for the Big Bend area.

Organization

In November 1984, the water development interests in Colorado, Nebraska, and Wyoming petitioned the Secretary of the Interior to establish a joint State/Federal Platte River Coordinating Committee to oversee the progress of the Joint Study. The Coordinating Committee established a steering committee and three Work Groups: Biology, Hydrology, and Management Alternatives. State and federal agencies, water development interests, and environmental groups were represented on each work group.

The **Coordinating Committee**, chaired by the FWS, included the Regional Directors of the FWS and the Bureau of Reclamation; the Director of Nebraska Department of Water Resources (who withdrew in 1988); the Executive Director of the Colorado Department of Natural Resources; and an appointee of the Governor of Wyoming. The committee met biannually, at which time it received reports from the work groups. These meetings also included updates on the litigation occurring in the Platte River Basin, and the Corps and the EPA would give updates on all their activities in the basin. Basically, any information relevant to the joint study was reported. The Coordinating Committee was responsible for the final decision to approve and adopt the final plan submitted by the management group.

The **Biology Work Group (BWG)** included representatives of the FWS, Bureau of Reclamation, the Corps, National Audubon Society, Wyoming Water Development Commission, Nebraska Game and Parks Commission, Colorado Water Congress, Nebraska Water Resources Association, Platte River Whooping Crane Habitat Maintenance Trust (Whooping Crane Trust), and the Interstate Task Force (a coalition of water development interests).

The BWG first met in September 1985 and adopted the following statement of purpose: "...identify the conditions in the Platte River Basin necessary for maintenance and recovery of the four endangered species, and the role of the Platte River Basin in the maintenance and recovery of the four species" (BWG Final Report). The BWG met from

monthly to every two months, and in 1990 issued a final report on the instream flow needs of the biological resources of the Platte River. The BWG's final report was to be used by the Management Alternatives Work Group to formulate a management plan for the Platte River system.

The Hydrology Work Group (HWG) included representatives from the Nebraska Department of Water Resources, the Colorado Water Congress, the Corps, Platte River Whooping Crane Trust, National Audubon Society, FWS, Wyoming Water Development Commission, Nebraska Water Resources Association, the Interstate Task Force, Colorado Water Conservation Board, and the Bureau of Reclamation. This group was charged with examining the hydrological processes and sources of water in the Platte River basin. The HWG met from monthly to every two months, and in 1989 produced two technical reports. One report presented an overview of existing surface water flow simulation models of the Platte, North Platte, and South Platte rivers, and the other evaluated sediment flow and channel geometry considerations. Like the BWG reports, these technical reports were to be used to provide input to the Management Alternatives Work Group for the development of an overall management plan for the Platte River.

Since completing their reports, the BWG and the HWG have not met. There was an understanding that should the need arise for further guidance, the workgroups could be reconvened. However, they have not been reconvened.

The Management Alternatives Work Group (MAWG) included representatives of the FWS, Bureau of Reclamation, the Corps, EPA, Nebraska Department of Water Resources, Nebraska Public Power, Nebraska Water Resources Association, Nebraska Natural Resources Commission, Central Nebraska Public Power and Irrigation District, North Platte Valley Water Coalition, Panhandle Area Development District, Colorado Department of Natural Resources, Colorado Water Congress, Colorado Division of Wildlife, Colorado Water Conservation Board, Colorado Division of Water Resources, Wyoming Water Development Association, Wyoming Water Development Commission, Wyoming State Engineer's Office, Wyoming Game and Fish, Interstate Task Force, National Wildlife Federation, National Audubon Society, and the Whooping Crane Trust.

MAWG meetings were usually in Denver and were chaired by John Lawson, the Bureau of Reclamation North Platte River Projects manager. The group met bimonthly, or at least quarterly, from 1989 to 1993 to examine the technical reports from the BWG and HWG, and explore alternatives for habitat needs within legal and water-use constraints. The group also met to review and improve on specific reports by individuals or MAWG subcommittees. Reports were written in between meetings and draft copies were mailed to members a couple weeks in advance to formally review and comment on these reports.

The official goal of the work group was:

To develop plans for the Platte River system that will provide the quantity, quality, and distribution of Platte River habitat primarily in the Lexington to Chapman reach consistent with recovery goals specified for the interior least tern, great plains piping plover, bald eagle, and whooping crane. The plans will allow water management and development to proceed in compliance with the Endangered Species Act. The plans will acknowledge and consider the beneficial uses of water pursuant to the respective state water rights systems and the use of water apportioned to a state pursuant to the compact and U.S. Supreme Court decrees concerning the waters of the Platte River and its tributaries (PRMJS 1989).

The MAWG was to make recommendations to the Coordinating Committee for a final management plan for the Platte River. There was always a MAWG meeting immediately before a Coordinating Committee meeting to verify that all members were in agreement on the draft reports being presented to the Committee.

One problem Tom Emerton (director of the Whooping Crane Trust beginning in late 1992) had with MAWG was that as the process dragged on, the representatives sent to the table were just watchdogs; they had no decision-making authority. He believed the process would have been more effective "if there was a greater sense of urgency." More "higher-ups" attended the Coordinating Committee meetings because of the possibility of decision-making. Otherwise, at MAWG meetings, many participants were just sent to observe, so little progress was made (1993). Jim Merrigan, of the North Platte Valley Water Coalition (a member of MAWG), agreed, stating the process was hindered because the FWS and the Bureau of Reclamation allowed functionaries below the governor's office to guide the process. Merrigan thought this level of representation was problematic because ultimately, the states have to be committed at the highest level to make the process work (1993).

Challenges to Consensus

Participant Distrust

From the beginning, there were strong feelings of distrust between the parties. Each perceived the other as not participating in good faith, and of having hidden agendas that disrupted and delayed the progress of the study. Extensive notes and minutes were produced because of accusations early in the process that information was being withheld by group members. Craig Faanes of the FWS recalled that "water accused the Fish and Wildlife Service of hiding information, and impeding the process of the Joint Study. Now, anything that anyone gets, they all get. It may be overload, but I don't ever want to be accused of hiding information again" (1990).

Environmentalists were also unsure of the motives of the other parties. They participated somewhat halfheartedly, and felt water development interests were simply using the process as a delaying tactic. Chris Meyer of the National Wildlife Federation commented that "one big problem is that there is no incentive to negotiate. The water development community views the Study as a way of buying time" (1990). If agreement takes a long time, water interests remain free of depletion charges and other requirements to improve wildlife habitat, especially for historical uses.

Water development interests viewed the environmentalists with a similarly wary eye, and were convinced the environmentalists also had hidden agendas. One water development interest participant claimed "the environmentalists are looking at water as the cure-all for everything. You can't go back to historical flows. The whooping cranes are a smokescreen—the real issue is sandhill cranes and the environmentalists know that the Endangered Species Act is the strongest thing they have, so they're using that." Merrigan of the North Platte Valley Water Coalition, summed it up by saying that there was a "fundamental distrust" on the part of all parties towards all the other parties (1993)

Data Negotiation

The Platte River ecosystem is extremely complex. Despite years of research, considerable uncertainty remains regarding the interrelationships between flows in the Platte River and the well-being of migratory birds (Shoemaker 1988). Quantifying instream flows needed by wildlife is a complex challenge and the subject of intense scientific debate. These uncertainties make it difficult to precisely quantify the gap between human demand for water and that required to maintain wildlife habitat. Nevertheless, estimates suggest the gap may be significantly wide. Debate over ecological connections between water development and wildlife on the Platte began when the FWS and conservation groups first claimed in 1967 that additional water development threatened the river's unique migratory bird habitats. Ever since the FWS designated portions of the Platte as critical habitat for the whooping crane, opposing biologists have scrutinized the same limited data on crane migration and ecology and developed arguments supporting both the view that the Platte is essential to the survival of the species, and that it is not (Shoemaker 1988).

Instream Flows The most intense scientific debate centered on efforts to quantify the instream flows needed to create and sustain suitable habitat conditions for the migratory bird species of concern. Although the need to maintain a year-round minimum stream flow is clear, at least to conservationists, precise definition of how much water is needed, in which parts of the river, and during what time periods, has proved elusive. All parties readily admitted their estimates needed to be refined through further research. Since 1985, participants in the PRMJS have tried to reach consensus on this issue. Their approach attempted to isolate the three primary "functions" or "benefits" provided by instream flows:

- (1) **Habitat flows:** the quantity and timing of water flow required to meet the needs of cranes and other migratory birds when they use the Platte.
- (2) **Channel maintenance flows:** flows needed to maintain a wide, unvegetated river channel in the areas currently in that condition.
- (3) **Wet meadow maintenance flows:** flows needed to create the necessary conditions for wetland foraging habitats adjacent to the river.

Reaching agreement on scientific issues proved extremely difficult for the Study's technical work groups. Some participants complained that water development interests disputed every single fact put forward, delaying the work groups' progress on their specific tasks. Ken Strom commented that "what's interesting about this group is that it is not a bunch of scientists sitting around discussing scientific models. It is a mixture of biologists and lobbyists making political decisions about the biology of a species. On the BWG we really have only three wildlife advocates, and we have prevailed by the strength of our arguments" (1990).

Bird Habitat Conservationists believed that the large number of whooping crane sightings on the Platte supported the claim that the river was of great importance; water

development interests claimed those records were biased by the fact that biologists look harder to find whoopers on the Platte. Developers said the fact that whooping cranes did not use the Platte during each migration proved that the river was not critical to the species (Shoemaker 1988). Faanes, a biologist for the FWS and chair of the BWG, recalled the frustration of arguing for several years over what most experts assumed to be common knowledge: "For the first year or so, the BWG meetings were nothing but fights about the 'alleged' use of the Platte by whooping cranes. I finally brought in a picture of the river with two cranes in it and the issue was not raised again" (1990).

The arguments and delays over data interpretation contributed to the general atmosphere of mistrust and claims of the lack of good faith. For example, one issue wrangled over for years was whether the river should be managed for least terns in sand pits or sandbars. The FWS provided data showing that any terns that reproduced in sand pits simply became food for coyotes and other predators, and that the only real population stability was out in the sandbar areas where the water protected the terns from predators. Carse Pustmueller, National Audubon Society's representative, expressed her frustration with the process: "It's been a nightmare. Water development interests hired their own consultants, who group the data differently to get different results" (1990). Faanes echoed this sentiment: "Water development interests hired consultants to show how our data was wrong. They did not go out and collect new data, they just reinterpreted what was there" (1990).

To get past this impasse, the U.S. Fish and Wildlife Service took a more "assertive" approach and made some unilateral decisions: "We had spun our wheels for more than a year, and I finally said enough and asked if they [water development] could provide any data to prove anything other than what we were claiming. They could not, so I said we would use the data that we had" (Faanes, 1990).

Reliance on Platte River Data An interesting element to this process was that water development interests insisted the technical work groups work only with Platte River data. Other applicable data from California, Mexico, or Arizona was not used in the scientific debate. While this meant delays, as data specific to the Platte River was collected, the BWG complied with this request. So the whooping crane model developed by the BWG was based only on data collected in the Platte River.

Faanes thought that in the long run, this requirement to use only Platte River data turned out to be better for the crane (and the process), because water development interests could not dispute data specific to the Platte River as vigorously as they might have disputed data collected elsewhere. Stated Faanes: "As we ran the model and got numbers for the required flow, water kept asking for more analysis of specific elements of the model. At each reanalysis, the outcome was a larger and larger number for the required flow to protect the crane, and less water for developers" (1990). As the reanalysis continued and flow requirements got larger, water development interests stopped requesting the reanalysis.

In general, to overcome data disputes, the technical committees resorted to a system of subcommittees. For example, on the BWG, a subcommittee of three scientists was convened to look at an issue and make a recommendation to the group as a whole. These recommendations were, in most cases, accepted by the rest of the group (Strom, 1990).

Traditional Recovery Efforts

Platte River Management Joint Study efforts operated on a track parallel to traditional recovery efforts. The recovery teams for the endangered species of the Platte River area were in place and operating, with little overlap with the PRMJS's membership and participation in work groups. According to one participant in the PRMJS, the recovery team was "kind of out of the loop." One member of the recovery team was on one of the Joint Study groups, but there was little coordination or interaction between the two efforts. Two reasons were suggested for this lack of interaction: (1) the recovery team did not want to be bothered with this type of process and was concerned about involving too many people, and (2) the recovery team was not really "into modeling," and modeling made up the bulk of the Joint Study work groups' technical work.

According to Bowman of the FWS, it was "difficult to deal with the fact that ESA-required activities such as section 7 consultations have continued to move forward on a track parallel to the joint study" (1993). This condition emphasized both the need for a joint study for Platte River management and the fact that no such study yet existed. Bowman added that "those section 7 consultations siphon off manpower from the joint study effort in order to get that section 7 consultation work done" (1993). In 1993 alone, Bowman was busy writing six biological opinions for Forest Service projects.

Structure and Facilitation

It was customary for the chair of each work group to act as facilitator, and this lack of formal facilitation and general meeting management skills was perhaps the biggest complaint from most PRMJS participants. Committee Chairs commented on the difficulty of being an advocate for their organization's interests while at the same time trying to facilitate the meeting. Pustmueller discussed the difficulty facilitators had in remaining objective: "Chairs take their organization's position. None has the training or personality to take the role of mediator or facilitator" (1990). Meyer of NWF agreed: "A major flaw is that the Joint Study didn't retain any intermediary mediation consultant. Federal bureaucrats are absolutely the worst mediators. They're not willing to bang heads" (1990).

Representatives from government agencies had complaints as well. John Shields, from the Wyoming Engineers Office, complained that:

Effective, proactive leadership is lacking. Agendas aren't always prepared, and meetings have been canceled. There are no guidelines for how much

side discussion is allowed. We have adjourned because a committee member has to leave early, and we haven't gotten through the agenda. It's frustrating. I'm concerned about having good meetings...*making* them happen instead of *letting* them happen (1990).

Dick Gorton of the Army Corps of Engineers commented that "there is no strong facilitator in the group, and this is not an efficient way to do things. If we had someone who was more skilled, we could reach agreement a lot quicker" (1990).

Decisions were made with an attempt to reach consensus on the issues, yet participants complained that a reliable method of reaching consensus had not been developed and used. Pustmueller commented that "disagreements are never really resolved. Usually the group comes up with several positions or recommendations, and doesn't decide on which one is best. We all know we won't have a consensus at the end of the process" (1990).

At times a questionnaire technique was used to highlight areas of agreement and disagreement, but this did not appear to help the process move towards a final decision. Shields explained: "We use a system where a '+' indicates agreement with a certain issue or statement, a 'o' indicates you don't care one way or the other, and a '-' indicates that you don't agree. I'm not sure we're going to achieve consensus" (1990). Another attempt at organization was to take minutes at each meeting and mail them to participants. Shields added that while the meetings were open to the press and public, they were not well publicized and no one other than the directly involved participants attended (1990).

Lack of Funding

All parties were unanimous in their complaints about limited or insufficient funding. Specifically, the PRMJS was not organized as a separate project within the budgets or work schedules of either the FWS or the Bureau of Reclamation. Funding for the study instead came from planning funds allocated to the Bureau of Reclamation's proposed Narrows and Prairie Bend projects (\$500,000 in FY 1986, \$200,000 in FY 1987, and \$500,000 in FY 1988 for all activities related to those projects) (Shoemaker 1988). This funding scheme was a potential problem because it had the potential to bias the study results toward the goals of those projects. The FWS had no separate funding of its own, but obtained some cost share money from the Bureau of Reclamation, which also poses problems in separating these funds from the rest of the Bureau's.

Duane Woodward of the Bureau of Reclamation commented that:

A big improvement would be line item funding, so we can have personnel. Now we're utilizing resources from other studies. This has hindered our whole process, and we haven't accomplished tasks on time. It would be good to have a funding mechanism to allow everyone to participate on the same level. (1990)

Bowman of the FWS concurred, stating that line item funding to cover the cost of federal government participation, and to provide travel money for non-federal government participants would have improved the process (1993).

Environmentalists saw themselves at an even greater disadvantage, because they did not have access to even the limited resources the government agencies had. Stated Pustmueller, "the environmental community generally doesn't have the resources for studies, so we depend on their [government] experts. We also don't have money to send staff to meetings" (1990).

Incomplete Representation

One representational issue involved the apparent imbalance between environmental and water development interests on the work groups. "Environmental groups see an imbalance to the representation. Chris [Meyer of NWF] and I are the only ones with wildlife interests, 25 are representing water development interests. We are always outnumbered. It is hard to imagine that anything will come out of this that the environmental community will accept," said Carse Pustmueller (1990).

However, there was a more critical representational issue, which was Nebraska's decision to officially stay out of the PRMJS process. In fact, the only significant media attention to or publicity for the study occurred when Nebraska officially withdrew from the process in 1988. Because of the lawsuits in which Nebraska and other parties are involved, most participants were reluctant to speculate about why Nebraska withdrew. Generally, it is assumed that the costs of participating in the study, Nebraska's opinion that the study would not accomplish anything, and the ongoing litigation over the 1945 Decree were the primary reasons for withdrawing and refraining from official participation.

However, as is apparent from the presence of various Nebraska organizations on the MAWG, Nebraska has not been totally ignorant of the study's progress. Nebraska participated on the Biology Work Group through the Nebraska Game and Parks Commission, which is not controlled by the Governor or the Director of the Department of Water Resources. There was also a representative from Nebraska on the Hydrology Work Group, but not in an official capacity. Michael Jess, director of the Nebraska Department of Water Resources and the official Nebraska representative from the governor's office, has only attended about three MAWG meetings since the withdrawal in 1988. Although he still receives all materials produced through the Study, in discussing problems with the process, Bowman from the FWS cited the "lack of reliable participation by Nebraska's official representative" (1993).

When asked in the middle of the PRMJS process, most parties were uncertain about what the absence of Nebraska meant for the outcome of the study, and how consensus would be reached without this key player. However, in 1993, as the process

drew closer to a final product, participants were very aware of the importance of securing Nebraska's full participation and support for the final program. Bowman of the FWS stated that:

Realistically, if the Governor of Nebraska and the state of Nebraska does not agree to participate as an equal partner, then the whole concept and the plan probably will have a much more limited effect. [It will be] virtually impossible to implement this program because Senator Bob Kerrey from Nebraska is on the appropriations committee. Congress won't appropriate funds if not officially endorsed [by Nebraska] (1993).

Similarly, Emerton of the Whooping Crane Trust stated that "the main problem right now is the fact that one of the critical parties [Nebraska] is not participating." He added that the problem is cyclical because "nothing is going to happen until Nebraska participates and Nebraska won't participate until something happens" (1993). When asked what specific problems the process faced, Merrigan replied, "Nebraska didn't play. That's number one." He said the state was negative about the process from the beginning and tried, at times, to "sharp shoot" it or "broadside it with a cannon" (1993).

Reaching an Agreement

Both wildlife and development interests initially approached the study optimistically. After several years, however, this optimism gave way to frustration with the slow progress of the effort. Completion of the study was initially set for March 1986 and later postponed until September 1987. By mid-1991, no management plan had been put forward and getting the parties to abide an agreement, if reached, will also present problems. Audubon's Ken Strom commented:

The recommendations will fall short of a real management plan, but the Bureau of Reclamation and Fish and Wildlife Service will feel compelled to buy into it. I won't be surprised if none of the states want to buy in. They have all reserved the right not to commit to anything. The only way to have a real plan would be to develop a compact among the states, and right now they all feel better maintaining their separateness. The states are not hurting enough at this point to do it (1990).

In 1990, there was a range of opinions regarding the likelihood of a successful resolution to the dispute. Government agency representatives seemed to be more optimistic about the outcome than other parties. Woodward of the Bureau of Reclamation thought the study would be a success because "there's been lots of participation from the different groups, and most people have focused on success in terms of participation, flow modeling, and species needs" (1990). Gorton of the Corps was a little more forceful in his thinking:

A plan will be developed, adopted and implemented with or without Nebraska's consent. Indirectly, they [Nebraska] will have to abide by the plan because the Corps of Engineers, Fish and Wildlife Service and the Bureau of Reclamation will be operating under the plan and will be the permitting agencies. Success will be measured by how many interests sign off on the plan. If everyone signs off on it, then it is a real success (1990).

Environmentalists were less optimistic. "I think actually getting a consensus management plan is impossible based on what the hydrologists are finding," said Pustmueller (1990). Meyer said "I'm pessimistic now that we're going to get anything out of it. Water development doesn't feel any pressure, they've made no concessions. The process is a waste of time" (1990). VanDerwalker, the former director of the Whooping Crane Trust, felt that the process was valuable because the study would provide a lot of information, "but it will not resolve differences. Most of those differences will be resolved in court" (1990).

The PRMJS Process Evolves

Prior to 1993, MAWG meetings were structured so that FWS personnel were assigned a task which they worked on between meetings. At the next meeting the results would be reported, criticized by the rest of MAWG, and sent back for revision. However, this process was not promoting or resulting in a consensus on how to protect the endangered species and still allow for water development. The difficulties culminated in January 1993 when the FWS reviewed its budget for the 1994 fiscal year and saw that no funding for the PRMJS was provided. MAWG also realized that a specific and detailed plan was too difficult and costly in terms of time and that the self-imposed deadline of September 30, 1993, would not be met.

Emerton of the Whooping Crane Trust described the stalemate:

Everyone knew the process was going nowhere [because] people were arguing...over how many acres was necessary in a particular segment of the river, or on the Biology Work Group side arguing about a particular flow for something. And since the ultimate answers to those sorts of minutiae play some part in other areas, especially relicensing decisions, as far as flows for other species is important in relicensing, everyone involved in relicensing didn't want to be nailed down in another forum (1993).

Emerton said that change was "probably the only alternative left" and added that "everyone was just tired of it" (1993).

The lack of additional time and money led the MAWG to change its goals. Instead of a detailed implementation plan, the plan became conceptual. The new approach was partially patterned after the Recovery Implementation Program for the

Endangered Fish Species in the Upper Colorado River Basin, in which the resolution of technical details would be left to an implementation committee. Bowman of the FWS said for the most part participants accepted this change, "although some people viewed that as a major weakness" because of problems that have developed with the Upper Colorado plan (1993). Emerton stated that although there was a debate about the change, it centered not on whether to change, but how the new plan should be formed (1993). In hindsight, Bowman said, rather than first trying to develop a detailed plan, it would have been better to develop an umbrella concept under which the groups could have proceeded, while the effort to secure congressional funding was made (1993).

Platte River Habitat Conservation Program

After January 1993, MAWG reoriented its work towards writing a conceptual program that would seek to protect endangered species in the Big Bend area in a cooperative effort by federal agencies, state agencies, water development interests, and environmental groups. After this reorientation, MAWG meetings were more productive and on May 17, 1993, MAWG completed a draft Platte River Habitat Conservation Program. The draft document:

Provides a framework upon which quantity and quality of habitat to be acquired, maintained, and protected to meet the habitat recovery goals specified for threatened and endangered species within the central Platte River Basin in Nebraska, is to be based and the steps that are to be implemented as part of a habitat conservation program (PRMJS 1993, p. 3).

Elements of the program include land management, water management, research and monitoring, information and education, and section 7 consultations. The draft program also provided estimates of program costs and sources of funding.

The draft program also calls for the creation of a Conservation Committee to oversee implementation of the program. The Committee's membership would include representatives from the FWS, the Bureau of Reclamation, one Governor-appointed representative each from the states of Colorado, Wyoming, and Nebraska; one representative appointed jointly by water development organizations, one representative appointed jointly by conservation organizations, and one representative appointed jointly by the Central Nebraska Public Power and Irrigation District and Nebraska Public Power District. The Committee would be responsible for:

Establishing policies for the Program, providing oversight and direction for all Program activities, approval of annual operating and capital expenditure budgets, resolution of differences among the Program participants, approval of plans, including the annual operating plan, long range plans, etc. The Committee will be responsible for assessing the overall effectiveness of the Program, meeting program goals in a timely

and effective manner, and will be ultimately responsible for coordinating all Program activities to achieve Program purpose and goals (PRMJS 1993, p. 33).

The Committee would also appoint a Program Director who, along with a minimum staff of one secretary and one technical assistant, would be responsible for operational management of the program.

On May 26, 1993, this draft program was presented to the Coordinating Committee in Cheyenne, Wyoming. The Committee was satisfied with this draft and felt it was still worthwhile to move the process along and try to reach consensus. MAWG hopes to send copies of the draft to all PRMJS participants, about fifty in all, by June 15, 1993, with comments due by August 1. Using these comments, MAWG will revise the draft and in late September or mid-October 1993, the Coordinating Committee will reconvene to discuss the resulting second draft. The goal is to reach consensus so the parties can proceed as soon as possible to seek congressional funding for the program. Merrigan called the draft program a compromise; it is not exactly what he would like to see, nor is exactly what anyone would like to see. He added that for all the parties, "selling that to constituents who don't know the tortuous path it took to get the draft will be difficult. I don't think it will survive as it is." Merrigan was hopeful that some modified version of the draft plan would be accepted.

Unresolved Issues

Although MAWG produced a draft program, consensus within the group was limited to agreeing to provide the draft to the Coordinating Committee for the purpose of review and discussion. According to Emerton, MAWG members watched the document being prepared but were not asked to endorse it, "nor would they have" (1993). There are still too many outstanding issues to produce agreement.

Litigation and Relicensing

The ongoing litigation dampens negotiation because no party wishes to weaken its legal stance by improperly agreeing to something in the negotiation forum. In addition, the FERC relicensing hearings for the Kingsley Dam and Lake McConaughy reservoir are controversial. These facilities were some of the earliest and largest federal water projects built on the Platte and they control eighty percent of the stream flow in the critical Big Bend region. The Whooping Crane Trust and National Audubon Society are involved in testifying about the relicensing and the decision, which heavily influences the Central Nebraska Public Power and Irrigation District because they own and operate these facilities. These parties are all members of MAWG. Again, no party wishes to say anything that conflicts with their position in another arena.

Depletion Charge

The draft program includes a discussion of a depletion charge for water developers. However, the decision on how much the depletion charge should be and whether or not it should apply to historic as well as new depletions remains unsettled. The depletion charge itself was not opposed because politically, water developers and the states realized they could not ask Congress for funding if they did not show a contribution on the part of private and state interests. But not surprisingly these parties are opposed to charges that would impose a large financial burden on new water projects. Also, they do not want a depletion charge imposed on existing projects, primarily because those projects would then be subject to section 7 consultations.

In contrast, wildlife interests think the depletion charges should provide enough money to purchase amounts of water reasonably similar to those being depleted. Some participants believe existing projects should pay depletion charges and therefore be subject to section 7 consultations. Bowman of the FWS said this may not be fair, especially in the case of a farmer who has used irrigation water for a hundred years. This farmer would be forced to apply for a 404 permit, submit to a section 7 consultation, and pay money never required in the past (1993).

The entire issue is based on discovering how much water is needed on the Platte to maintain habitat beyond the current average. While the FWS can exercise its opinion through implementation of the ESA, the draft program will not at any point include this information; instead, these decisions will be left to a future technical committee. Bowman suggested that although participants cannot agree on this complex issue right now, for "all the parties who would hopefully sign on, the assumption is that endorsement and participation will be in good faith," and the technical committee would be allowed to make its decision after hearing the different parties present their information (1993).

States Rights and Re-Involving Nebraska

New language in the draft program is also necessary to provide equity among the states over where the water will come from to maintain habitat on the Platte River. All of the states are concerned that each state share an equal responsibility for the future required water distribution. For example, if a water project in Colorado depletes the river, then Colorado should be responsible for releasing water to compensate for the loss. Merrigan said for the plan to succeed, you have to get through the states rights issue, which is going to involve working through some very strong feelings.

But equitable distribution cannot be worked out without all three states involved. So, one of the keys to achieving success with this process is to re-involve Nebraska. According to Bowman of the FWS, after the draft program is revised, MAWG and the Coordinating Committee must undertake a concerted effort to meet with the governors of all three states to confirm the support of Wyoming and Colorado and to persuade Nebraska to take a stronger stance (1993). In an effort to "sweeten" the draft program to

gain Nebraska's interest, mitigation measures for irrigation were included. This raised the interest of the Central Nebraska Irrigation District which spoke to the state, so the issue is not dead.

However, Emerton of the Whooping Crane Trust said the irrigation participants are only participating to ensure nothing bad happens; they do not offer any constructive input and spend the time criticizing MAWG's proposals. But, he added, "to a certain extent, we can be criticized for the same reason" (1993). It remains to be seen what Nebraska will do after the FWS and the Bureau of Reclamation meet with the state delegations. Emerton believed that Nebraska has some valid concerns about participation in this process, particularly because of the lawsuit against Wyoming over the 1945 Decree. However, he stated that it is a "critical thing whether they are successful in convincing the states to go forward with it. If Nebraska still says no it might be over with" (1993).

However, Merrigan of the North Platte Valley Water Coalition, a coalition of people from eastern Wyoming and western Nebraska, did not agree with this statement. Regarding whether Nebraska would continue to absent itself from the process, Merrigan said "I don't think they've got that choice right now." In June 1993, all the Nebraska PRMJS participants met with Mike Jess, the director of Nebraska Department of Water Resources, or Nebraska's "water czar." The purpose of the meeting was to review the draft document and give Jess their thoughts on how Nebraska should vote. Merrigan said the "governor has to make a decision" and he is either going to sign it or not. The meeting also included a discussion of what conditions to add should Nebraska agree to sign and Merrigan assumed the other two states were having similar meetings. But Merrigan said the irony is that the plan could be done without Nebraska's participation. If that occurred, then the FWS, the Bureau of Reclamation, Colorado, and Wyoming would be managing a stretch of river within Nebraska without any input from Nebraska. Merrigan said he did not believe Nebraska wanted to see that happen and he brought up that possible eventuality at the meeting with Jess.

Prospects for Agreement

In terms of being something concrete, Bowman believed the draft program had been well-received. To him, the centerpieces of the process and the resulting program were that it was "a cooperative attempt by competing interests to define a problem and a conflict and devise a way of mutually resolving. And that each party is willing to put in the time" (1993). Similarly, Merrigan thought that to the credit of the players, there is something down on paper, even if some of the original purposes of the study were scrapped. Because there are no real specifics in the draft program, what seems most important is the political aspect and hopefully the creation of the Conservation Committee. Bowman thought a positive element of the process was "the fact that it's a forum in which all the different views and interests and parties can come together and at least try to work towards a common solution." He also said the process was necessary to

tone down the real and perceived problems associated with the Endangered Species Act. (1993).

Emerton of the Whooping Crane Trust said the process "drew me to it because it's the only forum where all the players are involved. A basin-wide approach seems to me to be the only way to solve it...if nothing else, it certainly did provide an opportunity to share different viewpoints." He added "I think there's a lot of value to meeting people face to face. I probably attach more value to that than others." Regarding the draft program, Emerton said "I've been somewhat supportive." He said if the program is successful and congressional appropriations are secured, "that's to our benefit. I don't care who buys it [land and water rights]...if it gets something done in this stretch of the river." Still, said Emerton, there is "not much chance of success that anything will come of it:" "I don't hold much hope for it...[participants] don't seem to be sincerely interested in reaching agreement" (1993).

Overall, Bowman stated that he did not believe anything developed could be satisfactory to everyone. Emerton echoed this statement saying even the perfect proposal would not be entirely accepted because of all the different interests involved. However, Merrigan believed there was a fighting chance for the plan to be implemented on a trial basis for two reasons. One, some people truly want to see more whooping cranes and two, some people want to see it fail during the trial period so the plan can then be terminated. Merrigan believes the planning process is about finished and the implementation phase will begin soon. His group plans to participate in implementation, particularly because the water flows through the area his group uses and they have ideas about how it should be utilized.

Conclusion

It is interesting that with all the problems associated with the process (complexity, litigation, Nebraska's absence) and the belief by many that the process is not likely to be successful, the parties continue to meet. One participant jokingly said that the MAWG continued to meet out of "inertia" and because "everybody wanted to go to Denver every three months." But substantive reason offered by some participants is that no one wants to sit back and let the agencies make decisions that will affect them if there is an opportunity to have input into those decisions. So the issues are resolved as well as possible because, for all the parties, a process they help construct is preferable to having no input at all. This is particularly true because of the uncertainty involved in the section 7 consultations being conducted by the Bureau of Reclamation and the FWS. Throughout the process, these agencies have continued to conduct these consultations so they are present in people's minds. Bowman said the consultations are the reason the irrigation interests became involved. Again, no one wishes to let the federal agencies decide issues by themselves if an opportunity for input and influence exists.

Another reason to participate is that the Endangered Species Act is the law of the land. One participant said the "states would just assume the Endangered Species Act go

away and that's the attitude of the water development interests too...but the states realize the Act is an important federal law that must be complied with." Merrigan said that for a long time a basic problem was that the states did not understand why it was in their best interests to get something accomplished. Then finally, people began to read the Endangered Species Act. He thinks the Act leaves people with two choices: you can have the act "slammed down your throat" or you can work with it—"use judo not karate to accommodate the have-to's in the law." Merrigan would like the final plan to do the best thing it can for the species, be as painless as possible for the water interests, be efficient in the use of monetary resources and, moreover, to just get completed because "what offends me is this eternal fussing around." His position is that if you can cut through the litigation and accomplish goals with negotiation and discussions, a lot of resources are saved; too much money and effort would be wasted in a full-out court battle.

An additional reason to participate in the process is the opportunity to have all the parties sharing their viewpoints and information in one forum. Although there should be a way to have a positive exchange of information in a different forum, the process is seen as a way to keep informed about what is going on in the river basin. According to Emerton, the process has produced "some appreciation by...all interests of why so much importance is being attached to the Central Platte. Some change in thinking is going on. That's not going to go away. It's an area they are going to have to deal with." He added that there was also a "greater knowledge of what we're trying to do and what we're trying to protect" (1993). Merrigan stated his group has a tremendous stake in this because in these types of conflicts, agriculture has tended to lose—"I only want to get my nose bloody once." As for the benefits of the process, Merrigan said "I look at it as a two way street;" we have gained knowledge in the process and gained some understanding as well.

With all the problems and difficulties yet to be overcome, Merrigan stated that people have an interest in sitting down and focusing on solving a problem, rather than getting embroiled in litigation. "This isn't a winner take all deal," he said, because "if we don't find a basis of understanding then we all lose." And because the necessary cooperation "can't be done in a rock-throwing atmosphere," Merrigan believes people should just "put their shoulders to the wheel" and do what needs to be done. In summary, Bowman stated: "I'm encouraged by it [the process]. I would be more encouraged if we had reached the point we're at earlier and more encouraged if I could tell you there were no points of contention left and if Nebraska was a full partner." But he believes the "bottom line" is that the process needs to continue because, even though it is frustrating, things that are worthwhile are often frustrating.

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Appendix A: Parties to the PRMJS Process

U.S. Fish and Wildlife Service:

This government agency is responsible for conserving, protecting, enhancing and managing the nation's fish and wildlife resources. A major duty under Section 7 of the Endangered Species Act is to monitor federal activities to ensure that they do not harm fish and wildlife habitat. Other responsibilities include listing threatened and endangered species, enforcing laws protecting them from harm and illegal trade, consulting with other federal agencies to ensure their development activities do not jeopardize listed species or their critical habitat, and preparation of recovery plans. They are participating in this process because any new water development project on the Platte requires a section 7 consultation as to the affect of the project on the endangered species.

U.S. Army Corps of Engineers:

This agency provides irrigation and municipal water and power by constructing river impoundments, and is the federal government's largest water resource development and management agency. Primary activities in the civil works division are water projects for navigation, flood control and floodplain management, hydropower generation, water supply and irrigation, and recreation and natural resource management. The Corps is responsible for administering the 404 permit program, required by section 404 of the Clean Water Act. In granting or denying a 404 permit, the Corps is required to take into consideration biological opinions prepared by the Fish and Wildlife Service which assess the possible environmental impacts of the project.

U.S. Bureau of Reclamation:

This agency was created by the Reclamation Act of 1902, and is primarily engaged in construction and maintenance of irrigation works for storage, diversion and development of waters for the reclamation of arid and semi-arid lands. The majority of the Bureau's projects are large dams and reservoirs storing runoff for release into the channel during dry periods. They provide cheap, subsidized water to farmers.

The States: Colorado, Nebraska, Wyoming

All of the states are represented in the planning process by water development organizations, and their primary interest is in maintaining their right to develop water. Economic development in each state is highly dependent on water development, thus the strong interest in continuing to develop water resources.

The entire Platte River Management Joint Study Process, as well as the working relationships between the parties involved in the process, have been disrupted as a result of disagreements and lawsuits initiated by Nebraska and Wyoming. Beginning with the Dust Bowl years of the 1930's--when water was scarce and Wyoming began keeping more water than Nebraska thought it deserved--the two states have bickered almost incessantly over water rights on the North Platte (Winckler, 1989). Currently, Nebraska is not participating in the Platte River Management Joint Study, and is involved in a variety of lawsuits over water rights in the area.

The state of Colorado is active in the process, but is not involved in the lawsuits between Nebraska and Wyoming. It was suggested that Colorado is attending and participating and exerting the strongest push because they truly feel they have to have some system to deal with the conflict between water development and endangered species in place. They are the most up front about getting something done. Most of the water development projects are in Colorado and Wyoming, not Nebraska.

Mr. Michael Jess has been the director of the Nebraska Department of Water Resources since 1981, prior to which he was deputy director for six years. Jess has confused a lot of environmentalists because he has demonstrated what they see to be a double standard. In 1986 he granted a water right to the proponents of Nebraska's Catherland project, essentially overruling testimony that the project would harm endangered species on the Big Bend of the Platte. In that same year, he filed an action in the U.S. Supreme Court on behalf of Nebraska to prevent Wyoming from building a Dam on Deer Creek, citing that the project would imperil the same endangered species that he had managed to ignore in the Catherland case. And in 1988, after the Corps of Engineers granted a permit to the Deer Creek project, he filed a lawsuit in federal district court, claiming that the Corps and Fish and Wildlife Service violated the Endangered Species Act and NEPA in allowing the project to go forward. Jess has effectively stopped the Deer Creek project--proponents of the project have put it on the back burner until the various legal issues with Nebraska are resolved (Winckler, 1989).

Nebraska and Wyoming are also currently involved in a dispute about the Laramie River. Wyoming claims that the Laramie's entire flow has been apportioned between Colorado and Wyoming and that the decree permits Wyoming, therefore, to dewater the Laramie anywhere down to its confluence with the North Platte, while conceding that any surviving Laramie flows actually reaching the confluence become subject to the decree's 75/25 diversion of the natural flows during the irrigation season. Nebraska contends, on the other hand, that the 1922 Supreme Court decree in the Proceeding between Colorado and Wyoming ("Laramie Decree") apportioned the Laramie to the extent of Colorado's entitlement and Wyoming's Laramie decree entitlement, that is, its right to divert 272,000 acre feet for application on 181,500 acres of specified land down to and including Wheatland. Any remaining flows of the Laramie, according to Nebraska, become part of the natural flow and are divided 75/25 by the 1945 decree (Olpin, 1989). Several of these issues are wending their way in the form of lawsuits towards the U.S. Supreme Court; meanwhile the Joint Study process has been hampered by the lack of Nebraska's participation and the strained, mistrustful relationships between other parties as a result of the lawsuits.

Platte River Whooping Crane Habitat Maintenance Trust, Inc.:

This non-profit corporation was formed in 1979 as part of a court approved settlement of the Grayrocks Dam controversy. The settlement agreement approved by the court included the formation of a Trust with the purpose of restoring and managing

migratory bird habitat in the Big Bend reach of the Platte. The state of Nebraska, the Basin Electric Power Cooperative, and the National Wildlife Federation each appoint one trustee to the three member board which administers the Trust. The six consumer-owned utilities funded the Trust with a one-time payment of \$7.5 million. The Purpose of the Trust is to "protect and maintain the physical, hydrological, and biological integrity of the Big Bend area so that it may continue to function as a life-support system for the Whooping Crane and other migratory species which utilize it" (Van DerWalker, 1988). Primary responsibilities of the Trust are protecting and enhancing whooping crane and migratory bird habitat and initiating a waterfowl habitat monitoring program in the Big Bend region.

Water Development Organizations:

Local irrigation or natural resource districts are responsible for water allocations, and the amount any individual receives is regulated by the local district to ensure that senior users are satisfied first. Local districts are strongly opposed to allowing flow to remain in the basin for fish and wildlife habitat maintenance. Mr. Tom Pitts, a civil engineer, represents most of the water development interests.

Central Nebraska Public Power and Irrigation District (Tri-County): The district manages the Kingsley dam, the only large impoundment on the main stem of the Platte River in Nebraska. They are responsible for releasing water into the basin and thus regulate flow to the Big Bend region. Presently there is no minimum flow release requirement. Their operating license came up for renewal in 1987 and under the 1986 amendment to the Federal Power Act, FERC must give equal consideration to the protection and enhancement of fish and wildlife habitat when relicensing hydroelectric dams. Presently, the dam is operating under a temporary permit until minimum flow requirements are established.

Environmental Groups:

The primary groups involved are the National Audubon Society and the Colorado Wildlife Federation. According to one participant, the National Audubon Society has carried most of the load on environmental issues in the region. Audubon has been organized around the Platte for almost 20 years, and as a result has the most active members of any of the environmental groups.

Other groups have come and gone over the years, and at times have quite divergent views. This is demonstrated by the Plum Creek Reservoir, an idea supported by John VanDerwalker and the Whooping Crane Trust. Audubon has not endorsed Plum Creek, for several reasons, the most obvious being a philosophical objection to using a reservoir to solve a problem caused by reservoirs in the first place. Another project is the Landmark project (also an idea of VanDerwalker's) Landmark is a partnership between the Whooping Crane Trust and the Upper Big Blue Natural Resources District, a quasi-governmental entity of irrigators located near York. Landmark advances the proposition

that the best way to keep water in the Big Bend of the Platte is to have it committed to an irrigator somewhere downstream. As a result, the Whooping Crane Trust and farmers in the Upper Big Blue area formed a coalition to apply to the state for water rights. Currently the project is not being sponsored by any federal agency, and its backers have no money themselves (Winckler, 1989). It is not likely that the project will be successful.



CASE STUDY #3

THE SALMON SUMMIT¹

Introduction

The story of the Salmon Summit is the prologue to a story that will continue unfolding in the halls of Congress, federal agencies and the courts for years to come. It describes an effort to collaboratively develop a plan that would protect several species and subspecies of salmon in the Pacific Northwest, thereby precluding the necessity of having the species listed under the Endangered Species Act. Since the species were ultimately listed, the periodic collaborations that continue under the guise of the Salmon Summit are focused on developing a viable recovery plan for the various species.

The plight of the Pacific Northwest salmon species is not a new issue. In fact, during the 1980's, more than \$1.5 billion was spent on solving the problem, without much success. The issue is made more complex by the unique claims and rights of Indian tribes to the fishery resource. The issue is also fraught with tensions between the federal government and regional interests, with regional interests striving hard to maintain their control over the issue. It is clear to all involved that if nothing is done soon to protect the remaining salmon, then the various species will go extinct.

Background

The Columbia River Basin and the Salmon

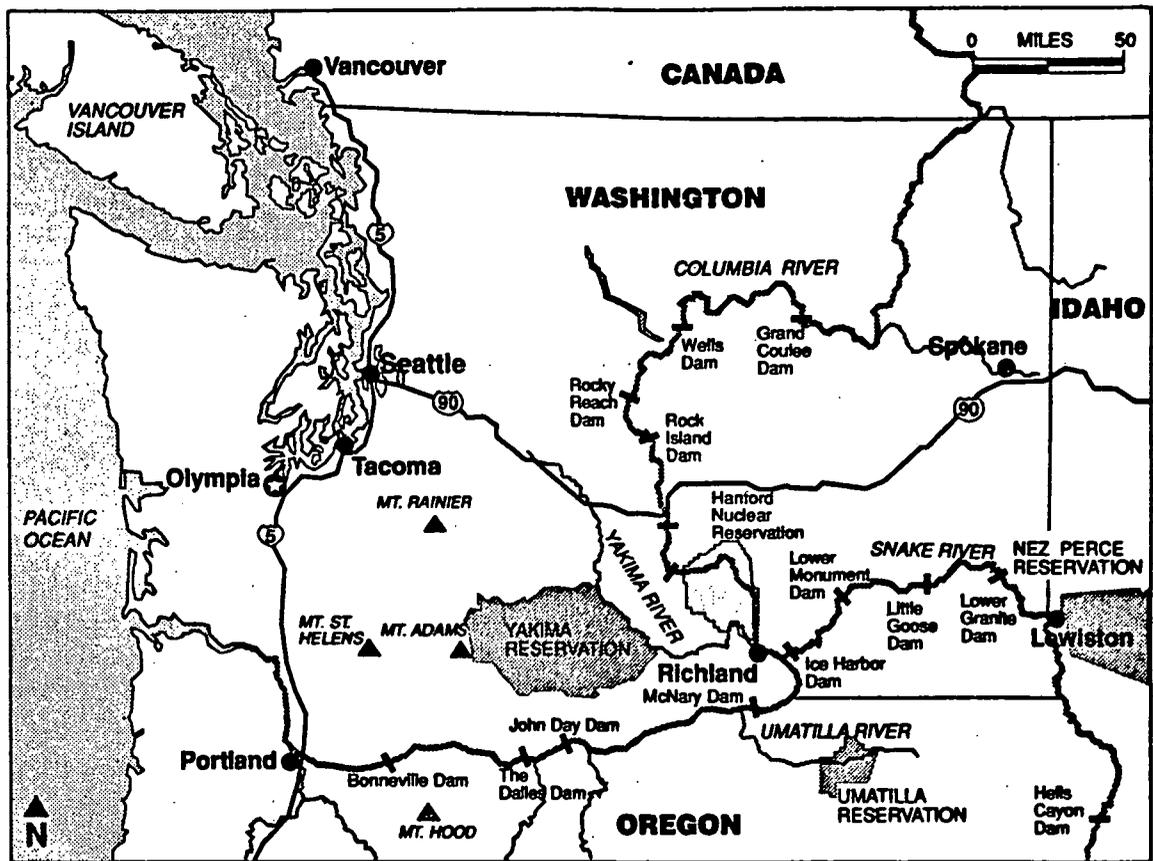
The Columbia River has its headwaters in Canada and is over 1250 miles long (see Figure 1). Its main tributary, the Snake River, is over 1000 miles long, and the total length of the Columbia and its tributaries is about 14,000 miles. The entire Columbia River basin is larger than the country of France, covering 260,000 acres. This system is the second largest navigational transportation system in the U.S. (the Mississippi is the largest), and it carries a quarter-million cubic feet of water per second to the Pacific Ocean. There are 136 hydroelectric power dams along the 1250 mile long Columbia, and only 44 miles of river still openly run free.

The Pacific salmon, as a set of five different species, is approximately nine million years old. These five species of salmon are the chinook (king), coho (silver), sockeye (red), chum (dog) and pink (humpy). After several years at open sea, salmon travel upstream to spawn, sometimes hundreds of miles, to return to the spot where they were hatched. After spawning, the salmon die. When young salmon (also known as smolt) hatch, they travel downstream to the Pacific Ocean and remain at sea until it is

¹ This case was written by J. Alan Clark and Rachel Selk.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

Figure 1: The Columbia River Basin



Source: Seattle Times, March 31, 1991

time for them to go upriver to spawn. This cycle has continued for hundreds of thousands of years.

Around the turn of the century, between 11 and 16 million wild salmon would leave the Pacific Ocean annually and travel up the Columbia River and its tributaries. In contrast, during 1991, 2.5 million salmon were expected to travel up the Columbia for spawning. Only 300,000 of these are wild salmon; the rest were hatchery raised. About half of the wild salmon runs in the Columbia River and its main tributary, the Snake River, are already extirpated. There are presently a little more than 200 runs remaining in the Columbia basin, and between 75 and 200 of these runs are thought, by some groups, to be on the verge of extinction.

The two main causes of the declines in salmon run populations are hydroelectric power dams and fishing. There are two different situations which cause hydroelectric power dams to have such a devastating effect on salmon populations. First, adult salmon find it much more difficult to make the traditional trip upstream when dams block their path. Presently, 50% of adult salmon are killed trying to get by the dams. In the case of the recently listed Snake River sockeye salmon, the 900-mile trip to its spawning ground used to take about nine days; today, the same migration takes about six weeks.

The other major mortality factor concerns the downstream migration of smolts out to the Pacific Ocean; between 90 and 97 percent never make it to the sea. Though fish ladders were built into a number of the Columbia system dams to assist the upstream migration of adult salmon, the downstream migration of the smolts was never considered. Many smolts are ground up in the giant turbines of the power dams. Others survive the turbines, but, because they are dazed from the experience of passing through the turbines, they become easy prey for natural predators such as birds. Additionally, because dams halt the natural flow of water, water temperatures become elevated by as much as 15 to 20 degrees, which kills the smolts. Finally, whereas the downstream trip historically took only a few days, the same trip today takes over a month. The increased length of time it takes to get to the ocean proves fatal for many of the remaining smolt as their physiology begins to change from that of a freshwater to a saltwater fish long before they reach the ocean.

Political Concern Develops Over Salmon

The first review of populations of salmon under the Endangered Species Act (ESA) began in 1973. In 1977, the suspected declines in salmon populations were documented: summer chinook - down 75%, spring chinook - down 50%, Snake River fall chinook - down 90%. The review estimated that smolt losses through the eight major dams were 95%. In response, the National Marine Fisheries Service (NMFS) began the process of protecting Columbia River Salmon under the ESA in 1979.

Congress realized that a listing under the ESA would exacerbate the full-scale water war already raging in the region. In 1980, to avoid more controversy, Congress had NMFS drop the petition process in lieu of their passage of the Northwest Power Act which created a regional commission called the Northwest Power Planning Council (the Council). One of the Council's primary tasks was to protect, mitigate and enhance fish and wildlife affected by hydroelectric power development on the Columbia and its tributaries. From 1980 to 1990, the Council, through utility companies, spent over one billion dollars on attempts to restore and preserve salmon runs.

Despite these huge expenditures, the salmon runs continued to deteriorate. In 1983, commercial chinook salmon harvests hit an all-time low. In 1987, the Council declared the Snake River coho salmon extinct and listed 22 other Snake River stocks as being in jeopardy. The decline in salmon runs is most dramatically demonstrated by the fate of the Snake River sockeye salmon. This salmon travels further to spawn than any other salmon; the trip is over 900 miles inland and climbs more than 6,500 feet. The sockeye spawns at a higher altitude than any other salmon. In 1988, four Snake River sockeye salmon were spotted at its traditional spawning grounds. In 1989, only two salmon crossed the Lower Granite Dam on their way to Red Fish Lake in Idaho. They were both female. In 1990, only one crossed the same spot, but, apparently, the lone survivor never made it to the spawning grounds.

The Petitioning Process Begins

On March 30, 1990, the Shoshone-Bannock Tribes petitioned NMFS to list the Snake River sockeye salmon under the ESA. Two months later, Oregon Trout, along with several other environmental organizations petitioned NMFS to list four other salmon runs. Two weeks after the Shoshone-Bannock Tribes filed their petition and two weeks before Oregon Trout's already announced petitions were filed, Senator Mark Hatfield (R-OR) requested that NMFS conduct a study to provide an immediate assessment of the probability of success for listing these salmon runs under the ESA. Senator Hatfield announced that any listings under the ESA would have the potential of becoming, politically speaking, another "spotted owl."

On June 4, 1990, seven weeks after Senator Hatfield's study was requested, the results were released. The study showed that there were, indeed, significant declines in the wild runs of Columbia and Snake River salmon. The next day, NMFS ruled that the petition filed by the Shoshone-Bannock Tribes presented substantial information indicating that the petitioned action might be warranted; the first hurdle to be crossed in a successful listing under the ESA. On September 11, NMFS made the same finding for the four runs petitioned by Oregon Trout. Recalling the lack of economic impact assessments during the spotted owl controversy, Senator Bob Packwood (R-OR) asked the Government Accounting Office (GAO) to study the potential economic consequences of classifying these salmon runs in the Columbia or Snake Rivers as threatened or endangered. Packwood also noted that the salmon controversy could generate more

controversy than did the northern spotted owl and asked that GAO complete its economic analysis by July 1991.

The Salmon Summit

In response to the petitions and NMFS' findings, Senator Hatfield called for the creation of the Salmon Summit, the goal of which would be the writing of a comprehensive plan for restoring fish lost to hydroelectric power and other industries by February 1, 1991, two months before NMFS was required to decide whether to list the first of the petitioned salmon runs. The Summit was comprised of approximately 30 representatives of Indian tribes, state and federal governments and agencies, agriculture, shipping industries, sport and commercial fishers, manufacturers, federal and private dam operators and utilities. Senator Hatfield asked The Mediation Institute of Seattle to mediate the Summit's meetings. In October 1990, the Summit began its first set of meetings. A few weeks later, on November 5, 1990, NMFS announced that the Sacramento River winter-run chinook salmon would be added to the list of threatened species under the ESA.

The Parties

Fishers Commercial and sport fishing for salmon is a \$133 million a year industry. Though the various groups of fishers held considerably divergent views on many aspects of this controversy, they tended to agree on a number of issues. For example, all of the fishers primarily faulted hydroelectric power dams for the declining salmon runs. At the Summit, they presented documents which alleged that dams kill twenty times as many salmon as fishers catch. Fishers pointed out that, though the dams are not the only cause of the decline, they were the most significant cause of damage. The fishers felt they were too much of a target as, politically, it seemed easier to say "no fishing" than to tell power plants to reduce or stop electricity generation. Additionally, the harvest had declined for all fishers. For example, both Indian and non-Indian gill-netters produced roughly \$49 million in direct and indirect income in 1988. In 1989, these same groups produced only \$18 million in income.

All fishers wanted more water spilled over the dams to help young fish migrate downstream. Another issue which affected all fishers was Indian rights to salmon catches. Beginning with Supreme Court rulings in the 1970's, non-Indian fishers have been forced to substantially reduce their catch. The 1974 decision of U.S. District Court Judge George Boldt, known as the "Boldt Decision," recognized Indians' traditional, spiritual and commercial right to salmon and gave the tribes at least fifty percent of the fish. Before the Boldt Decision, tribes caught less than five percent. Another judicial opinion mandated that a third of each season's run is protected to go out to sea or to return to spawn.

Non-Indian Commercial Fishers. Other than open-sea fishers, such as the Japanese, there are two primary groups of commercial fishers: ocean trollers and gill-

netters. Since the 1974 Boldt Decision, ocean trollers, who fish with hook and line, have seen their chinook harvest reduced by 82% and their coho harvest reduced by 94%. In dollars, these declines continue to grow. In 1988, ocean trollers generated \$62 million in direct and indirect income for Washington and Oregon. In 1989, this income dropped to less than \$38 million. Gill-netting operations tend to be family-run. Most gill-netters are third or fourth generation fishers. Their catches have also been decimated.

Sport Fishers. The sport fishers take comparatively few salmon. However, they are a rather powerful group, who tend not only to blame the power industry for salmon declines, but also commercial fishers, particularly gill-netters. In Washington and Oregon, the state legislatures have, at the request of sport fishers, introduced bills which would all but close commercial fishing on the Columbia in those states.

Indian Tribes. In addition to the consequences of the Boldt Decision noted earlier, the Indian tribes brought different perspectives to this dispute. Not only do the Indians have short-term economic concerns, but they are concerned about their traditional way of life. For example, during the Summit, a proposal to eliminate all harvest of a certain run for 50 years was discussed. One tribal fisher stood up and said: "You're talking about 50 years as if it was a long time. But the Indians took care of this resource, before you showed up, for thousands of years. That's the time frame we should be talking about in the future - thousands of years."

When discussing the economics of salmon at the Summit, the chair of the General Council of the Confederated Tribes of the Umatilla Indian Reservation declared: "How can I tell you what the salmon are worth? The salmon define who I am. What else can I say?" The most emotional and divisive debate of the final Summit meeting was the Indian tribes' position on fish reduction. An attorney for the Shoshone-Bannock Tribe stated: "If I was an Indian tribe, I wouldn't give up a scale . . . unless there's an honest effort to save fish, not just put money in people's pockets."

Electricity Producers Electricity, generated by the Columbia basin's 136 dams, produces seventy percent of the Northwest's electricity output and provides enough power to keep 16 Seattles lit year-round. This electricity is sold as far away as Salt Lake City and Los Angeles (including Disneyland). Electricity rates in the Northwest are forty percent lower than the national average.

Northwest Power Planning Council. The Council, as noted earlier, was created by Congress in 1980 to avoid having salmon listed under the ESA. The Council was, in 1993, in its third year of a multi-year study by a 33-member scientific committee to find ways to double the overall salmon populations in the Columbia system. The Council was given the tasks of protecting, mitigating and enhancing fish and wildlife affected by hydroelectric power development on the Columbia and its tributaries. Since its creation, the Council has been responsible for over one billion dollars spent on these tasks.

Bonneville Power Administration. The Bonneville Power Administration is the region's largest power wholesaler. In 1989, Bonneville generated power worth \$1.2 billion from the Columbia system. Bonneville officials have suggested that salmon protection could result in wholesale rate increases from ten to thirty-three percent. Bonneville has offered to spend \$1.5 billion in the 1990's to help smolts get past the dams. For example, huge, rolling screens are to be built to divert smolts from the deadly turbines. One of Bonneville's main concerns is its \$8.4 billion debt incurred, in large part, from the ill-fated Washington Public Power Supply System. This system resulted in the largest municipal bond default in US history (\$2.25 billion). The Office of Management and Budget was pushing Bonneville for more power revenues to pay off these debts. An April 8, 1991 article in *The Bond Buyer*, suggested that power companies in the Pacific Northwest may have their bond ratings adversely affected by these developments. Financing for projects already planned and underway may also be jeopardized. Decreased flow from the Columbia River's dams translates to decreased revenues, especially from the lucrative sale of surplus electricity to places like California. The surplus sales total over \$100 million per year. Many of the Summit members were not sympathetic to this concern. Idaho Governor Cecil Andrus told Bonneville to tell California to "drop dead. They'll have to find power elsewhere to run their hot tubs and air conditioners The only loser is [Bonneville's] repayment to OMB. That cost is society's contribution to saving the salmon runs. Hopefully, OMB will look upon it as an investment in the future." Bonneville stated that draw downs will require the region to build power plants.

Dam Operators. Eighteen major power plants were built, and are currently run, by the Army Corps of Engineers (the Corps). These dams provide eighty percent of the power bought and sold at wholesale by the Bonneville Power Administration. The other dams are operated by public utilities and private concerns.

Agriculture The agricultural community was primarily concerned with water quantity and cost. Approximately ten percent of the Columbia system's water is diverted for irrigation. Water diverted from the Columbia irrigates a desert that averages just seven inches of rainfall per year. Because of irrigation, this desert now supports more than 70 crops, including the extremely lucrative products of apple and potato farming. More than \$5 billion worth of crops are grown on eight million acres of irrigated desert. Even so, the farmers want more water diverted. In 1991, the Bureau of Reclamation was completing an environmental impact statement for a \$313 million proposal to divert water to irrigate another 87,000 acres.

One of the problems with irrigation diversion from smaller tributaries is that it often dries up parts of those rivers during the summer and fall months when adequate water flows are crucial for salmon smolts headed to the ocean. Also, agricultural runoff, including heavy amounts of pesticides, silts up smaller rivers and raises water temperatures to levels the salmon cannot tolerate. The water supplied to farmers from the rivers is heavily subsidized. Though an acre-foot of water costs \$54 to \$73 to deliver,

farmers typically pay only about \$2. Taxpayers cover the rest. The farmers also get bargain rates on the electricity required to run the irrigation systems.

A final issue for farmers was concern over transportation of their goods. Dam draw downs affect barge transport, a primary means of getting Northwest goods to market. Moving wheat by barge costs about fifteen cents per bushel, compared to ninety-five cents per bushel for trucking. Dropping the water level in the Lower Granite Dam on the Snake River would cost grain farmers thirty-five to forty percent more to ship their product. Part of this increase would be caused by barges having to lighten their loads in order not to drag on the bottom. Finally, draw downs of just five feet would leave many irrigation pumps high and dry.

Industry Most industry in the Pacific Northwest is a direct beneficiary of the area's inexpensive electricity. However, the primary industry which would be affected by rate increases and decreased availability of water is the aluminum industry. The aluminum industry is highly water-intensive and electricity amounts to roughly a third of its production costs. Forty-three percent of the nation's aluminum is manufactured with inexpensive electricity produced by hydroelectric power dams on the Columbia system. Higher rates could dull the industry's competitive edge, forcing some companies out-of-state or out-of-business.

Navigators/Shippers In 1989, between 48 and 66 million tons of cargo were moved on the Columbia and Snake Rivers. According to an industry representative at the Summit, this represented some \$12.2 billion in commodities. Included in this amount was \$3 billion in agricultural products and \$1.9 billion in forest products. The Columbia system handles thirty percent of all domestic wheat exports. From the perspective of navigators and shippers, the problem with most of the proposed solutions is that they include draw downs. As the dams were not designed for travel at proposed draw down levels, traffic would be severely impeded or even halted. One industry representative said that draw downs from April 15 to June 15 would put about ten ports completely out of business for that time period.

Government Senators. The two Senators involved in the Summit were Bob Packwood (R-OR) and Mark Hatfield (R-OR). Their primary goal was to avoid the political backlash they suffered from the spotted owl dispute. Both were several steps ahead of the listing process and paved the way for educated responses to the eventual listing of the salmon under the ESA. Senator Hatfield called for the Summit, convinced the parties to participate and had a representative at all Summit meetings. At the time, Senator Hatfield hoped to avoid having the salmon runs listed under the ESA. Senator Packwood, in calling for a GAO study of the issue in July 1990, said: "The Endangered Species Act could fundamentally alter the ability of federal agencies to manage the river system for all its resource uses. If the northern spotted owl experience has taught us anything, it is that the absence of objective information about economic impacts leads to uncertainty and fear. The spotted owl scenario can and should be avoided."

Governors. The governors of Idaho, Montana, Oregon and Washington often met separately over the salmon issue. Oregon Governor Barbara Roberts wanted to develop a regional plan the federal government could adopt as the official plan. Idaho had suffered the worst effects of the diminishing salmon runs, and its governor, Cecil Andrus, therefore called for the most drastic measures. Andrus was Secretary of the Interior under President Carter, and he was the first party to submit a comprehensive recovery plan to the Summit. Washington Governor Booth Gardner stated that the region must solve its own fish problems or fisheries agencies in Washington, D.C., such as NMFS, would do it for them. One concern about a federal solution was that outside entities, particularly California, might be given permanent property rights in the Northwest hydroelectric pie.

National Marine Fisheries Service. Rollie Schmitten, the regional director of NMFS, saw the Summit as the best hope to avoid a spotted owl-like controversy. After the Summit failed to come up with a comprehensive plan by its self-imposed deadline, Schmitten stated that he wanted the group to reconvene and write a recovery plan. NMFS has the responsibility for listing or not listing the species, holding hearings and developing recovery plans.

Army Corps of Engineers. The Corps built and runs eighteen of the major hydroelectric power dams on the Columbia system, which provide eighty percent of the electricity brokered by Bonneville Power Administration. The Corps also oversees hatchery operations, and hauls, by truck and barge, more than 20 million juvenile fish around the dams each year. The Corps' 1992 budget contained \$31.7 million for juvenile fish bypass construction activities, which was up from \$18.5 million in 1991. The 1992 budget also included \$1.7 million to continue the fish transport program, \$4 million for fish passage research and \$6.4 million for its salmon hatchery program. Senator Hatfield was traditionally a big supporter of the Corps, and they had a friendly relationship. However, because the Senator attacked the Corps for refusing to implement the Summit's limited agreement, the Corps went on the defensive. Senator Hatfield is a powerful legislator and the Corps realizes this fact.

USDA Forest Service. In late January 1991, the Forest Service signed a policy statement pledging renewed support for increasing annual salmon runs. Much of the salmon's spawning grounds is on national forest lands. The Forest Service planned to rehabilitate roads and other areas contributing sediment in streams, and remove sediment and silt from streams. They have also proposed limits on grazing in areas along critical spawning streams.

Environmentalists Oregon Trout. Oregon Trout filed four of the five petitions to list salmon runs under the ESA. This group was quite outspoken with the press and managed to build a rather sizable outside coalition. Oregon Trout threatened to begin the petition process for 192 other salmon runs it believed might require protection under the ESA.

Defenders of Wildlife. This group criticized NMFS for following the standard listing procedures for the salmon. NMFS has the power to use its emergency authority to decree any species as threatened or endangered without utilizing the standard, two-year step-by-step process delineated under the ESA. Defenders wanted immediate and dramatic steps taken, rather than more delays. In an April 2, 1991 interview with U.S. Newswire, the counsel for Defenders' wildlife policy stated: "We can alter the flows through the dams just this month and save what took an age to create. When there are as few as two of a species left in the world, you don't make them wait for places on the ark."

The Mediation Process

The sessions of the Summit were mediated by The Mediation Institute under the direction of Gerald Cormick. The Mediation Institute was contacted by Senator Hatfield's office, and the mediation bills were paid primarily by the Northwest Planning Council and the states of Idaho, Montana, Oregon and Washington. Cormick's mediation style was to enable the parties to work out the solutions themselves: "The role of mediators is not to reach agreements for people, but to help them find areas of agreement and disagreement and stay out of the way." He felt that the more the mediator has to talk, the worse the mediation is going. Some Summit participants have called Cormick's approach "chaos." One environmental participant felt that the facilitators had no grasp of the technically complex issue, and underestimated the influence of some of the high-power participants. Another Summit participant noted that:

The Salmon Summit took the approach, currently in vogue, of resolving resource disputes by getting all the competing interests together to voluntarily work out a settlement. Ideally, this method may be feasible, but in practice it's like trying to get a bunch of raccoons that are interested in a fish head you've buried in your garden to sit down and discuss why it should be left alone. You might get the animals to engage in some unnaturally civil behavior for awhile, but in the long run the head's probably a goner. (The Seattle Times. March 26, 1991. Page A7).

Summit meetings were held around a hexagonal-shaped ring of tables and were open to the public except during private caucuses. According to Cormick, "we try to set up an opportunity for people to explore ideas, to create a forum for discussion. But they need to come together on their own. No matter what kind of dispute you're talking about, at some point people have to get out of the formal sessions, let their hair down and get at it." Not everyone was critical of the process. Some participants felt that the Summit moved closer to agreement as time went on, and that more progress was made during the few months of the Summit meetings than was made in the previous twenty-five years.

Reaching a Limited Agreement

Though many issues presented themselves during the Summit meetings, four major contentious issues emerged:

- An overall population goal for the runs under consideration for listing under the ESA.
- Whether to curtail harvest, and, if so, by how much.
- Whether to continue barging and trucking fish around the eight major Snake and Columbia River dams to reduce smolt mortality.
- How to improve passage through the dams (without transporting them) during the annual juvenile migration to the Pacific Ocean.

Much of the alignment of the representatives at the Summit could be characterized by traditional "upstream-versus-downstream" coalitions. By the third meeting, two loose-knit coalitions had formed. One group was comprised of the Indian tribes, pro-fish people and Idaho. The other group included hydropower, navigation, irrigation, federal agencies and Montana, Oregon and Washington. The latter group was known as the "common ground" coalition. Near the end of the mediation process, the coalition balance was altered when Pacific Northwest Utilities left the common ground coalition and backed a plan by the Indian-fish-Idaho group to improve juvenile fish survival. This switch led to the development of the Summit's limited agreement.

One baseline measurement of the Summit's progress was the 1980 Northwest Power Act. As an Indian representative put it: "We can't sit here and negotiate something less than what's guaranteed under the law. We already have a law that assures these fish will be restored to some sustainable level." Additionally, many of the parties, particularly those in the common ground coalition, commented to the press that they felt that the ESA was hanging over their heads like a huge hammer or an anvil.

During the Summit meetings, three separate plans emerged. Bonneville Power Administration proposed a plan that favored utilities and advocated the continued spending of money rather than alteration of power production, navigation and irrigation. Bonneville's plan included a \$1.5 billion, 10-year program to stabilize, protect and enhance Columbia fish runs. The greatest opposition to this plan came from Oregon Trout which stated: "We've gone through 10 years of negotiated management on the river [through the Northwest Power Planning Council], and it hasn't worked." A second plan was presented by Oregon Trout, the group that petitioned NMFS to list four of the five runs under consideration. Their plan called for substantial cutbacks in power generation and fish harvest. Not surprisingly, the common ground coalition refused to consider Oregon Trout's plan.

The third plan was a 12-page, 93-point product of The Mediation Institute and was a compromise between the other two plans. It called for seasonal draw downs and turbine shut offs. Smolts would still be barged under the Institute's plan, and new catch limits would also be established. Neither coalition was pleased with the compromise plan. Al Wright, a representative of the common ground coalition, stated: "This is no ground for compromise. It is the worst of everything. Splitting the baby is a nice idea, but nobody wants half a baby." Similarly, Ed Chaney, a representative from the Indian-fish-Idaho coalition said: "We cannot be persuaded this plan will work. We are opposed to . . . just about everything we see here."

Chaney, an Idaho sport-fishing spokesperson and Wright, executive director of the Pacific Northwest Utilities Conference Committee, were the two most public and outspoken members of the Summit. Many participants agreed that if any consensus was to be reached, it had to start with these two men. During the January 1991 meetings, Chaney and Wright did meet privately to try to iron out some sort of agreement between the two of them to reduce fish deaths at the dams without imposing unacceptable impacts on the complex river system.

Though the Summit did not reach agreement by the February 1, 1991 deadline, it continued to meet. More than once the parties appeared on the verge of a substantive agreement. However, these tentative agreements all fell through. The last attempt at a comprehensive agreement apparently failed when Indian representatives refused to compromise on harvest limits.

Instead of a comprehensive recovery plan, on March 4, 1991, the Summit announced a "limited agreement." This agreement amounted to a tentative decision to lower the water level three feet below minimum operating levels at the Lower Granite Project from March 24 to April 6, 1991 to create a current that would help speed smolts downstream. During this time span, the plan would halt shipping on the Snake River and reduce electricity-generating capacity by as much as ten percent. The timing of the planned draw down coincided with maintenance work the Corps had already planned for the Lower Granite Project.

Implementing the Limited Agreement

Eleven days after the limited agreement was reached, the Corps, which was to coordinate the implementation of the limited agreement, announced that it would not lower the water level as agreed. The Corps' justification was that the planned draw down would be neither productive nor feasible, nor would there be biological benefits to the fish. Senator Hatfield was outraged at the Corps for not cooperating with the Summit. On March 21, 1991 from the Senate floor, he threatened the Corps with a reduction of authority and control unless they began cooperating with the Summit.

The next day, March 22, 1991, Senator Hatfield added language to the Desert Storm spending bill, requiring key federal agencies to tell Congress, within 30 days, how

they would respond if the five petitioned species of salmon were listed under the ESA. Under the legislation, which passed, the agencies were also required to expedite an environmental review and list any additional authority they might need to respond properly to ESA listings. The agencies then had to report to the Senate Appropriations Committee, on which Senator Hatfield was ranking Republican.

After the Salmon Summit

The Salmon Summit officially ended on March 4, 1991. In discussing the Summit, Idaho Governor Cecil Andrus noted:

I had high hopes for the Summit, but it became obvious that only some of the participants wanted to solve the problem. The downriver power interests clearly have the notion that if they can stall for two or three years the problem will go away because the anadromous fish will become extinct. If I sound a little pessimistic and a little ticked off, you've got it right.

Dan Silver, an aide to Washington Governor Gardner Booth, was not quite so pessimistic. He stated that one of the biggest accomplishments of the Salmon Summit was that widely diverse groups established working relationships and seriously talked about solutions.

The Governors' Proposal

Primarily under the direction of the governors of Washington, Idaho and Oregon, the major interest groups brought together by the Salmon Summit continued to negotiate after March 4th. This group came up with its own proposal for 1991, which called for reduced harvests, changes in water allocation and new standards for hatchery-breeding programs. The governors' proposal was presented at a hearing which Senator Hatfield had scheduled on the salmon controversy before the Senate Appropriations Committee in Portland.

Silver considered the governors' proposal the second step in a four-step process. The first step was the Salmon Summit, the third step would be to develop major plans for the next few years and the fourth step would be to draw down water every year so more fish would survive. Silver believed the good will and relations that grew out of the earlier Salmon Summit have already paid off in discussions about the draw downs.

A May 3, 1991 *Seattle Times* article, in discussing the governors' proposal, stated: "It is the first proposal to win general support from environmentalists, utility companies, industries, and tribal and government leaders." A spokesperson for Governor Andrus stated that "for all that it isn't, the plan is an exceptional statement of cooperation. It is evidence this region can work together." Apparently, some participants had hoped the proposal would avert any more runs of salmon being listed under the ESA. The

governors, however, did not think that their plan would avert an endangered species listing for the salmon, but they hoped it would be enough to persuade federal authorities to leave salmon-recovery efforts in the hands of regional leaders. While announcing their proposal, the governors' group stated that the negotiations had gone as far as they could and that the negotiations must come out from behind the doors of the government aides and others to bring the public back into the process. NMFS called for the Salmon Summit to reconvene. But, once again, the Corps balked at the proposals. Silver, however, stated that the Corps' "statements have sounded like the same old paralysis. We're going to knock them into action."

New Coalitions Form

The Summit mobilized groups with common interests. After the Summit was over, many of these groups with newly discovered common interests began to form new coalitions. For example, in June 1991, salmon supporters held a "Salmon Congress" in Hood River. Of the Congress' purpose, Ed Chaney said "we're going to develop a political action plan to take the fish's fight to the governors' offices, the federal agencies and Congress, because clearly, unless the public reasserts control over the Columbia and Snake Rivers the fish are going to be lost." (*East Oregonian* 5/3/91) After this meeting, forty environmental, sport and commercial fishing groups formed a coalition called "Save Our Wild Salmon." According to Chaney, the coalition was preparing "to level the playing field": "This is the Andy Warhol moment for the fish. The fish have never had more friends than they do now. If we can't whip the BPA and the Corps on their home court, we'll have to change the venue to the courts and Congress." (*High Country News* 3/9/92) He added, "unless we act, they're going to kill the fish. We have no lack of legal authority or mandate, we have a lack of spine or lack of will from the people who are supposed to save the fish." This coalition supported Governor Andrus' plan to drain four Snake River reservoirs by as much as forty feet to mimic the effect of a fast moving river.

Earlier in 1991, a number of Columbia and Snake river economic users formed an informal alliance with the stated goal of finding ways to protect salmon while maintaining the economic interests of the river system users. This informal coalition, the Columbia River Alliance, continued to gather interest, increased membership, and was formally incorporated in July 1993. Required contributions to join the Columbia River Alliance run tens of thousands of dollars. Competing coalitions exist. For example, the Columbia River Alliance has engaged in direct competition for members with the Pioneer Ports River Alliance, which was formed specifically by ports to fight the 1992 draw down agreed to under the Summit and to fight any draw downs scheduled for the future.

Oregon's "Salmon Summit"

In December 1992, Oregon Governor Barbara Roberts convened a two-day "Salmon Summit" for Oregon which culminated in a list of projects meant to address the salmon problem. One of the projects was a plan to convene another Salmon Summit, but this time with attendees from Washington and California. At the Oregon Summit, NMFS

representative Gary Smith "urged" Summit attendees to "reverse" salmon declines "without having to resort to invoking the Endangered Species Act."

Formation of Salmon Recovery Plans

During the original Summit, Senator Hatfield and the governors of Idaho, Montana, Oregon and Washington asked the Northwest Power Planning Council to develop a comprehensive, regional salmon recovery plan through a public participation process in an attempt to avoid the same kind of bitter and expensive experience that occurred with the spotted owl. In September 1992, nearly two years later, the Council finalized its plan. NMFS also began working on a salmon recovery plan, but NMFS' focus was the requirements of the ESA for the newly-listed salmon species. The NMFS salmon recovery plan was released in November 1993. According to a number of Summit participants and observers, the work done at the Summit provided a starting point for both the Council's and NMFS' salmon recovery plans and Summit work product was directly incorporated into these two recovery plans.

The Action Moves to the Courts

A number of Summit participants and observers have stated that the overall failure of the Summit to reach indepth consensus resulted in polarization, with parties returning to their original, pre-Summit positions. In 1992, Angus Duncan of the Northwest Power Planning Council observed: "We are no longer seeing a healthy quality of enlightened self-interest as we did back in the Salmon Summit days. We have seen sideways movements by irrigation, utilities and aluminum companies, and now by the Pacific Northwest Utilities Conference Committee, on reservoir draw downs, fish transportation and harvest. Environmental groups, utilities and others are lining up to file lawsuits." Adam Berger of the Sierra Club Legal Defense Fund (SCLDF) has similarly concluded that after the Summit was over, participants returned to their pre-Summit positions.

The repeatedly stated fear of many, that regional control of the salmon issue would be lost if parties resorted to the courts, seems to be on its way to becoming fully realized. Since July 1992, SCLDF has filed four lawsuits over salmon issues and is threatening a fifth suit over the newly released NMFS salmon recovery plan. In these suits, SCLDF has (1) sued under the ESA over the Council's salmon recovery plan; (2) sued NMFS, the Army Corps of Engineers, the Bureau of Land Management, and Bonneville Power regarding the ESA consultation process; (3) sued the US Forest Service for failure to consult over salmon in two Oregon forest plans; and, (4) sued over salmon harvest issues.

Some utility and agricultural water users have stated that by SCLDF taking the federal agencies to court, all other river interests are virtually forced to follow with their own suits. In fact, Native American tribes are suing the Army Corps of Engineers and others under the ESA and NEPA over the smolt barging program. Other environmental

groups have sued NMFS for issuing a Section 10 permit for the Corps' smolt barging program. At least three lawsuits have been filed by utilities and aluminum companies against the Secretary of the Interior for actions taken under the ESA. And irrigation and port interests have filed a suit to prevent scheduled dam draw downs.

ESA Listings

On April 2, 1991, NMFS announced its proposal to add the Snake River sockeye salmon to the list of endangered species under the ESA and on June 7, 1991, NMFS announced its proposal to list three of the four salmon runs petitioned by Oregon Trout as threatened species. (56 *Federal Register* 29542, 29547 and 29553). NMFS decided the fourth run was so biologically mixed with hatchery fish it no longer existed.² Consequently, this run was not listed. NMFS also decided to combine the spring and summer Snake River chinook salmon runs into one species. This decision was based on NMFS' recent policy on the definition of a species, where the determining factor is whether a group of flora or fauna represent an ecologically significant unit.³ On the same

² Many sport fishers do not care whether the fish they catch are hatchery raised or wild. On average, fewer than 4% of all hatchery-reared salmon survive. The consequential inbreeding on hatchery raised fish makes a population much less hardy. They are more vulnerable to disease and changes in its environment such as temperature change. Hatchery raised fish also seem to get lost trying to go upstream to spawn. One theory has suggested that this is because the salmon are shipped downstream, and they cannot locate necessary "road markers." Other fishers, however, care a great deal about whether a fish is wild or from a hatchery. The major concerns are biodiversity and genetic survival. When a population of any species drops below a certain number, the genetic material necessary to keep the species viable is threatened because all reproduction is groups like these results from inbreeding. Some biologists have identified 300 as the number of spawning fish required to maintain genetic diversity. The issue of hatchery versus wild is pervasive throughout the aquiculture and fisheries management arenas and is not endemic to the salmon controversy.

³ The November 5, 1990 official listing by NMFS of the Sacramento River winter-run chinook salmon marked the first time that a "subspecies" of an abundant species was listed under the ESA. Concern over what constitutes a "species" had begun brewing when the petition to list this subspecies was first submitted back in early 1989. In response, NMFS and the Fish and Wildlife Service, which both share jurisdiction under the ESA, held a "Vertebrate Population Workshop" in June 1990 to develop a consistent approach for determining what qualifies as a distinct vertebrate population. A species or subspecies must be a "distinct vertebrate population" in order to be listed under the ESA.

On March 13, 1991, two weeks before it was required to rule on whether to list the first of the petitioned salmon runs, NMFS published a notice of interim policy on "Applying the Definition of Species under the Endangered Species Act to Pacific Salmon." This notice stated that all salmon runs are not conclusively distinct vertebrate populations and that they must meet certain listed criteria in order to be listed under the ESA. These criteria are: "(1) it must be substantially reproductively isolated from other conspecific population units; and (2) it must represent an important component in the evolutionary legacy of the species. Only Pacific salmon stocks that meet these criteria will be considered by NMFS for listing under the ESA." (56 *Federal Register* 10542) NMFS also announced that it would be publishing more pervasive policy statements on not just salmon, but all vertebrate species, later in the year.

day the above runs were proposed for listing, Senator Hatfield said: "We're ahead of the game; we're moving ahead with recovery planning." However, in December 1991, NMFS officially designated the sockeye an endangered species, and in March 1992, NMFS declared the Snake River spring and summer chinook threatened and the fall chinook endangered.

In 1992, NMFS released a "no jeopardy" opinion, stating that, for the year, the hydrosystem did not jeopardize the fish. On April 15, 1993, NMFS was supposed to release another jeopardy opinion regarding the safety of fish passage in the Snake and Columbia Rivers. However, as of May 31, 1993, no opinion had been issued. At the time of this writing, the opinion was expected soon and

the word behind the scenes is that NMFS scientists in the Northwest have recommended a jeopardy opinion, but utility, aluminum, and irrigation lobbies in Washington, D.C. are trying to strong-arm the agency top officials to rule no jeopardy and leave the hydro system alone. (*High Country News*, 5/31/93)

Litigation

Legal action was inevitable. In April 1991, the Northwest Resource Information Center et al., a salmon advocacy group based in Eagle, Idaho, (with the Northwest Environmental Defense Center in Portland, Oregon, and Idaho Steelhead and Salmon Unlimited of Boise), filed suit to prevent the Bonneville Power Administration from diverting 4.5 million acre-feet of water a year from storage in the Upper Columbia River Basin to British Columbia Hydro in Canada. In early 1992, Adam Berger, associate attorney for the Sierra Club Legal Defense Fund in Seattle, commented that "we're at the point where we can't wait any longer." (*High Country News* 3/9/92) He forecast "active" litigation in the coming year, under the Endangered Species Act as well as other statutes such as the National Environmental Policy Act, National Forest Management Act and the Northwest Power Act. Accordingly, in 1992 Northwest Resources Information Center et al. filed suit against NMFS, BPA, the Corps, and the Bureau of Reclamation. The suit challenged NMFS' 1992 decision to declare that the hydro-system posed "no jeopardy" to the Snake River salmon. As of May 1993, the case was still pending in U.S. District Court in Seattle.

In contrast, the Pacific Northwest Generating Cooperative, Alcoa and Public Power Council filed suit against Secretary of Commerce Ron Brown. They argued that NMFS' 1992 biological opinion made too many concessions for the salmon. Plaintiffs lost the case when U.S. District Court Judge Harold Marsh in Portland ruled that they had no standing. Marsh, who has been called the "fish czar" because of the quantity of salmon cases on his docket, concluded that:

To permit these plaintiffs to proceed with their claims under the Endangered Species Act would be akin to permitting a fox to complain that the chickens have

not been fed -- sure, he has an interest in seeing that the chickens are well fed, but it's just not the same interest the farmer has, nor is it an interest shared by the chickens. (*High Country News*, 5/31/93)

The lack of consensus on the most appropriate measures to help save the fish species has also resulted in litigation. While some argue that barging smolts past the main stem dams to the Columbia River estuary will help limit mortality, others argue that most of the smolts die during this process and that the survival rate of wild salmon might increase if they were allowed to "swim for it." Northwest Resources Information Center, Yakima Indian Nation, American Rivers, Oregon Natural Resources Council and Sierra Club filed suit against NMFS and the Corps to stop the barging of salmon smolts. Ed Chaney said the reason for the lawsuit was because "barging will be revealed as one of the biggest scientific hoaxes of all time" because fifteen years of barging had not improved the salmon numbers; rather the barges are "iron coffins" in which a high percentage of smolts die. (*High Country News*, 5/31/93) In this case, plaintiffs attempted to get a temporary restraining order and a preliminary injunction to halt the barging of smolts. However, in May 1993, Judge Marsh denied both motions and argued that "the scientific pros and cons of barging were too much in dispute for a mere judge to separate them out." (*High Country News*, 5/31/93)

Draw Downs

In December 1991, the Northwest Power Council completed its comprehensive salmon recovery plan, which "represents a balancing act among competing interests." (*The Washington Post* 1/14/92) This plan ruled that the Bonneville Power Administration and the Corps should begin preparations for significant drawdowns of water (25-40 feet) in 1995. This plan also called for: farmers on the Upper Snake River in Eastern Idaho to conserve one million acre feet of water by the mid-1990's; a study of the economic feasibility of constructing a fish migration canal; and, improving hatchery fish survival.

In late March and early April 1992, the Corps conducted a test drawdown at Lower Granite Dam, a year later than the Summit's limited agreement originally required. In discussing this test, Senator Hatfield, in an American Rivers press conference, stated:

We have come up with what we call a recovery program for the salmon that was listed, a regional idea under the Northwest Power Council, following up on the salmon summit. We produce 12,500 megawatt production, and we're going to also draw down, as far as the water downstream to help in the fingerling migration downstream, a part of that water supply and those reservoirs to test -- and I emphasize the word test - - to see if that will have a positive effect on a restoration of the salmon. The National Marine Fisheries Service is using this basic proposal coming out of this region to see if it will satisfy the Endangered Species Act requirements. (*Federal News Service* 4/8/92)

The test was timed to end before the spring migration began; its purpose was to determine how fish ladders, other fish structures, and irrigation equipment needed to be altered before the scheduled 1995 drawdowns.

A draft report released by the Corps analyzing the test draw down was not positive. The report stated that:

draw downs will require structural modifications on dams and reservoir banks; new turbines capable of operating at lower water levels; new fish ladders and fish barging facilities; extended spillways and boat ramps; and the shoring up of port docks and grain terminals...[and] will cost between \$1.3 billion and \$4.9 billion, and will take 14 to 17 years to construct. (*High Country News* 12/28/92)

The report added that the one month test also led to "\$1 to \$1.6 million of lost electric power and cost riverside businesses almost \$4 million in lost revenues." Some people agree with the Corps' assessment. According to Glenn Vanselow, executive director of the Pacific Waterways Association, the proposed draw downs will cause "a social and economic tidal wave." Similarly, Don Chapman, a consultant for downriver utilities, referred to the draw downs as "mainstem Valium." He argued that the Snake and Columbia River dams would always be a hazard for the fish species regardless of these measures and that efforts should be devoted to barging smolts and improving fish habitat in spawning grounds. Yet Idaho Governor Andrus continues to argue that a healthy salmon population brings money to the region:

The salmon issue has been couched in terms of how much it is going to cost to protect the fish. It is time to talk about what the loss of salmon runs has already cost the region and about the enormous boost to the economy a sport fishery represents. When we lost our salmon sport fishing season in 1977, the impact on local economies was tremendous. In the city of Salmon alone, 120 jobs were lost.

Conversely, in river communities, Main Street is a hive of activity when the steelhead season is strong.

Now we have the opportunity to restore jobs lost when the salmon went away and to increase tourism dollars as we did by improving Idaho's steelhead fishery. Salmon restoration means economic development for the entire Snake River basin. (*High Country News*, 4/6/92)

Hopes that draw downs at different dams would increase river flow by speeding the smolts' trip to sea, were dampened as the 1991 winter's snowpack was but sixty three percent of normal, similar to the previous four drought years. There would simply not be enough water to reach the minimum water flow through the Snake River's 140 mile expanse of reservoirs. However, the 1993 winter brought the snowpack percentage close to normal and it was believed that runoff would rise to the highest levels since 1986.

This extra runoff is beneficial to the salmon smolts because it helps them to spill over the dams without any migration assistance from draw downs or barging. Meanwhile, the species continue to decline as the dam and fishing pressures that have pushed them so close to extinction persist. As Jim Yost of the Idaho Farm Bureau notes: "Salmon are the only endangered species you can buy in a can." (*High Country News* 3/9/92)

Conclusion

Salmon recovery is clearly a complex problem that requires the concerted, collaborative efforts of all parties to fully understand the issue, to determine workable solutions, and to carry out those solutions. The obvious mitigation measures -- trucking the salmon to spawning grounds and smolts to the ocean, hatcheries, fish ladders, turbine screens, and periodic drawdowns -- confront the problem of genetic diversity and the long term survivability of the various stocks, runs and populations. However, remedying the obvious cause of the species demise -- the 144 dams along the Columbia and its tributaries -- implies severe economic hardship to the industries and communities dependent upon the low cost power and water resources provided by these same dams. The stakes for all parties are incredible, making other disputes, in contrast, seem like child's play.

Reactions of participants to the impact of the Salmon Summit on progress towards resolving the issue involved are either negative or very slightly positive. Fishermen feel that "little was accomplished at the Summit." Others believe that more progress was made than in the previous 25 years. Oregon Trout President Bill Bakke feels that the problem-solving format of the Summit had been useful and that more might have come of it had the Summit been reconvened and involved more follow up. He believes that implementation of Summit agreements should have been facilitated as well. When asked if Oregon Trout was planning to continue a run-by-run listing approach, Mr. Bakke replied: "What we really need is a regional management plan for the Salmon. But we use the ESA listing process because it's all we've got." Don Bevan, head of the NMFS Salmon Recovery Team, feels that while the Summit did have some impact on the NMFS Salmon Recovery Plan, most of that impact was on a very general level. Much of the data presented during the Summit was not new, applied to salmon runs not listed under the ESA or was based on data already gathered by NMFS. All involved express frustration at the way in which the issue is being handled. Most would prefer a more regional, coordinated and collaborative process. But the process is back in the courts because, at this point, those involved have no other choice.

One fisherman who attended the summit expressed his sadness at not only the Summit's but at society's inability to come to grips with the realities of exploiting environmental resources in the manner observed over the past 100 years:

At the final meeting, the Yakima tribal patriarch, Levi George, started us out with a ceremonial chant traditionally used before the salmon harvest to thank the Creator for the food he was providing. I tried to let the spirit reach me, but the

acoustics were bad -- a room full of people in business suits who think of a river in terms of megawatts and acre-feet can suck the life out of a gesture like that in less time than it takes to say Celilo Falls.⁴

But let's keep asking the question: Are we capable of learning from those who believe it's healthier to live in the natural world, instead of just on it?

Ultimately, we'd better hope so.⁵

⁴Before the Dalles Dam flooded the area in 1956, Celilo Falls was a spectacular traditional native fishing site on the Columbia River.

⁵ Richard Bard, "Little Accomplished at Salmon Summit," Seattle Times, March 26, 1991, p. A7.



CASE STUDY #4

THE KEYSTONE BIODIVERSITY DIALOGUE¹

Introduction

In 1988, biological diversity had become an increasingly high profile issue for the federal land management agencies. Agencies such as the USDA Forest Service and Bureau of Land Management had been facing increased public pressure and litigation from interest groups concerning their land management practices. In response to this pressure, the Keystone Dialogue on Biological Diversity on Federal Lands was convened during 1989 and 1990, to address the issue of how biological diversity should be incorporated into federal land management decisions. Involving primarily federal land management agencies, public interest groups, industry representatives and congressional staff, and mediated by The Keystone Center, the Dialogue was an attempt at informal discussions to achieve consensus on the issue.

The challenge of managing public lands so that biological diversity is maintained, while also managing for human use and increased populations is at the heart of the Keystone Policy Dialogue on Biological Diversity on Federal Lands. The definition of biodiversity hints at the complexity of the issues that have arisen around it: it is the variety of life defined at genetic, species, community, and ecosystem levels and the adherent systems which these organisms maintain and operate within². The broad scope of this issue provides a contrast to alternative dispute resolution processes applied to site-specific. The fragmented outcome of the Dialogue, as well as the uncertain implementation of its recommendations, illustrate the challenge inherent in attempting to define strategies on the broad issue of biodiversity.

Origins of the Biodiversity Dialogue

The Keystone Policy Dialogue on Biological Diversity on Federal Lands was initiated by individuals in the federal land management agencies involved with the issue of biological diversity. Hal Salwasser, at the time Deputy Director of the Wildlife and Fisheries staff of the U.S. Forest Service, described the beginning of the Dialogue as a time when "biodiversity was ripe for federal action." The Office of Technology Assessment Report on "Technologies to Maintain Biodiversity" had just been released but it lacked specificity on how to proceed on biodiversity issues.³ An informal group from the Forest Service, the Fish and Wildlife Service, National Park Service and Bureau

¹ This case study was developed by Margot Smit.

² The Keystone Center, Biological Diversity on Federal Lands: Report of a Keystone Policy Dialogue, 1991.

³ Office of Technology Assessment, Technologies to Maintain Biodiversity (Washington, DC.: 1987), Congress of the United States, Office of Technology Assessment.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

of Land Management had met twice in an attempt to coordinate actions on biodiversity. Though the Forest Service was the only agency with anything close to a biodiversity mandate, in its National Forest Management Act (NFMA) of 1976, it was clear that all the federal land agencies had stakes in the issue and clarification was needed as to what would be prudent action under their existing mandates. Environmental groups had sued the Forest Service repeatedly for failing to uphold the NFMA requirements of managing for diversity, and had challenged the land management practices of the Bureau of Land Management on similar grounds.

In addition to public concern concerning agency activities, biodiversity legislation was being drafted in Congress. A National Biodiversity Conservation and Environmental Research Act (H.R. 1268), sponsored by Congressman James Scheuer (D-NY) had been introduced in the House Science, Space and Technology Committee,⁴ but the concerns of a number of key parties including those of agriculture and the pharmaceutical industry, had not yet been incorporated in the bill.

At this point in the debate, Salwasser discussed the issue with staff at the The Keystone Center in Colorado. He decided that using a Keystone Center policy dialogue process might advance two goals: First, to officially sanction more active involvement and build a broader base of support within the agencies on the biodiversity issue and, second, to involve outside interests that would potentially have to concur on the issue. As Salwasser noted: "It appeared that legislation was not going to go anywhere for a while and this was a way to build broader support for biodiversity conservation while the legislation was being worked through ... It made sense for the agencies to attempt to begin working towards a politically-viable consensus." In addition, the Dialogue might influence the content of biodiversity legislation, should congressional politics allow a bill to move forward.

The Keystone Center

The Keystone Center is a private, non-profit organization based in Colorado which operates as a neutral, third party mediator primarily of national and international public policy conflicts in the areas of environment, health, and technology. The biodiversity dialogue was an example of the Center's policy dialogue approach, where individuals are drawn from the diverse interests affected by a particular issue to participate in off-the-record discussions. The goals of these dialogues are to 1) formulate consensus recommendations on the issue at hand, 2) clarify areas of disagreement, and 3) produce a final report summarizing the group's deliberations.⁵ The Keystone Center, with the assistance of a steering committee, identifies the participants to include in the

⁴ Cosponsored by Claudine Schneider (D-RI), HR1268 called for among other things a National Center for Biodiversity to be established for research on methods of conservation, and amendment of NEPA to require consideration of biodiversity effects in federal actions. A similar bill, HR 4345, was introduced in the previous Congress which was reported out of the House Science Committee but did not get marked up in the Merchant Marine and Fisheries Committee.

⁵The Keystone Center, Biological Diversity on Federal Lands: Report of a Keystone Policy Dialogue, 1991, p.5.

process, works with participants to develop an agenda, and convenes and facilitates dialogue sessions.

The Keystone Center facilitators are professionals in mediation with training in science policy issues, who work to maintain a forum where all participants have equal opportunity for input. To aid in this process, time is divided between plenary sessions and smaller work group sessions. The Keystone Center dialogues operate under three ground rules: 1) participants attend as individuals; 2) discussions are off-the-record and not for attribution; and 3) no documents are made public without the consensus of all participants.⁶

In late 1988, with a \$10,000 grant from the Forest Service, Keystone began preliminary assessments for a biodiversity dialogue. At the outset, the Forest Service representatives guaranteed funding for the process. Their initial contribution was followed by funding from the other agencies, a grant from Pew Charitable Trusts and contributions from the industry sector. The Keystone Center, in keeping with its policy of neutrality, works to achieve a balance in funding that represents the different sectors involved.

Participants

In November 1988, The Keystone Center convened a steering committee of individuals from the various interested parties to assess the viability of a dialogue on the issue of biodiversity. Considerable interest was expressed concerning the dialogue; individuals were enticed by the opportunity to meet in an informal setting to get the issue "on the table." In particular, with the northern spotted owl then being considered for designation as a federally-listed endangered species, the word biodiversity had received much attention in the press.

In agreement that a dialogue was timely, The Keystone Center and steering committee worked together to draft a list of invitees. Indeed, the issues likely to be discussed in the dialogue were of interest to so many parties that it was difficult to narrow down the number of participants to a size appropriate for discussion. (The Keystone Center tries to keep its dialogues at no more than fifty individuals.)

As outlined below, participants in the dialogue fell primarily into four major categories, (numbers in parentheses correspond to the number of participants from that particular agency):

Environmental Interests

Environmental Defense Fund

Committee for the National Institutes for the Environment

Natural Resources Defense Council

Defenders of Wildlife

⁶ The Keystone Center, Annual Report 1990, (Keystone, CO: The Keystone Center, 1990)

The Wildlife Society
The Nature Conservancy
Wildlife Management Institute
World Resources Institute
World Wildlife Fund
National Audubon Society
National Fish and Wildlife Foundation .
*The Wilderness Society

Federal Agencies

Bureau of Land Management (3)
Department of Defense
Environmental Protection Agency (4)
National Park Service (3)
U.S.D.A. Forest Service (5)
U.S. Fish and Wildlife Service (4)

Commodity Interests

American Farm Bureau Federation
*American Forest Council
Consolidation Coal Company
Davis, Wright and Tremaine Attorneys
Exxon Company - USA
Freeport-McMoran Inc.
National Forest Products Association
*Plum Creek Timber Company
*Public Lands Council
Shell Oil Company
Society of American Foresters

Federal Legislature

Senate Committee on Agriculture
Subcommittee on Fisheries and Wildlife Conservation and the Environment,
House Merchant Marine and Fisheries Committee
Subcommittee on Natural Resources, Agriculture Research and Environment,
House Science, Space and Technology Committee (2)
House Committee on Agriculture

Other

College of Resources, University of Washington
Florida State University
World Bank

*These parties did not sign the final report.

Participants offered different reasons for their involvement. Faith Campbell of the Natural Resources Defense Council (NRDC) described the dialogue as her highest priority at the time. She described having neither a great deal of hope nor skepticism but saw it as an opportunity to advocate for a biodiversity policy "with teeth":

Bush was just starting out and I had some hope that he would be better than Reagan and the mood was such that everyone was expecting a more environmentally-friendly time with the 90's being talked about as the environmental decade. We sensed that industry would still not be very open but that the politics of the future were on our side. The fact that the agencies had put up the money for the dialogue showed that they were under pressure and would have to bow to it in some way.

Faith Campbell felt the Dialogue would not have happened without legislation simultaneously being proposed in Congress. She described the environmental community as "finding holes in every argument" made by agency representatives in Congressional hearings that biodiversity was already being addressed in current programs. John Humke of The Nature Conservancy described his participation as "a very natural step to take" since The Nature Conservancy has a great deal of cooperative involvement with the federal agencies. Rupert Cutler, at the time President of Defenders of Wildlife and formerly Assistant Secretary of Agriculture overseeing the USDA Forest Service during the Carter Administration, described having a long-standing interest in the subject area and in alternative dispute resolution processes, and was interested in a forum that might lead to some incremental improvement in the management of federal public lands on behalf of biodiversity: "This seemed like a unique opportunity to move agencies in that direction. I didn't see any downside or risk in participating." David Wilcove of The Wilderness Society was concerned with the loss of biodiversity and felt the Forest Service was not doing an adequate job to conserve it.

Congressional staff representatives participated to promote a political consensus that would support Congressional legislation. For example, Mike Rodemeyer, Staff Director of the Subcommittee on Natural Resources, Agriculture Research and Environment in the House Science, Space and Technology Committee, was interested in "heading off a political debacle" of lack of support from different interests on the biodiversity legislation: "Legislation on biodiversity was in the process of being written and we were eager to get a group together that could begin to talk about those issues before the political rhetoric really got heated up." He noted that there were no forums in the legislative arena that were well suited for an open discussion of how the federal agencies were progressing in their on-the-ground management for biodiversity conservation.

Individuals from the industrial sector saw the Dialogue as an opportunity to provide industry's perspective on an issue that was gaining momentum with the public and Congress as well as to have a hand in clarifying the issue's definition. According to Carl Hess of the Public Lands Council, there "needed to be someone there to present

more use-based solutions, rather than the standard way of handling environmental problems of being centralized and bureaucratic." Connie Brooks, a commodity lawyer, suggested that, "industry needed to be there to shape the Dialogue, and overall to help maintain the balance of representative interests". John Heissenbuttel felt that "any opportunity to get the issue on the table was good."

Loren Hicks of Plum Creek Timber and Jim Rochelle of Weyerhaeuser were asked to attend by the National Forest Products Association (NFPA), a timber industry lobby group, to represent both the industries that purchase federal timber and the private land timber companies. Loren Hicks expressed concern that the dialogue might produce a slant that was unfavorable to the timber industry if they were absent. Because there was a wide spectrum of views on biodiversity in the different companies, Hicks conferred with NFPA members to learn what they would want to achieve through the dialogue. As perceived by Hicks, NFPA's main concern was that procedures and strategies be devised such that federal land managers could conserve biodiversity in ways that did not require legislation.

Overall the dialogue was perceived by agency participants as a positive next step towards highlighting the scientific and aesthetic importance of biodiversity and the need to make it a higher priority within the agencies. Overall they felt they had a lot at stake in the issue, particularly given pending legislation, and expressed hope that the dialogue could influence how the legislation evolved. Hal Salwasser felt it would be an opportunity to develop broader support for biodiversity conservation. Ted LaRoe of the U.S. Fish and Wildlife Service, described his concern that "the federal government was not living up to its public trust responsibilities concerning biodiversity. We had lost and stood to lose more species. What we had been doing was not enough to preserve biodiversity and I was therefore there to promote some kind of change in this." As the Keystone Dialogue began, the legislative proposals were unclear as to a sequence of steps for biodiversity management or potential funding levels that might be allocated to biodiversity management.

The Dialogue Begins

When the Keystone Biodiversity Dialogue first convened there was considerable discussion to clarify the scope of the ensuing discussions. Some felt that private lands needed to be included in order to properly address biodiversity nationwide. As Loren Hicks put it: "the biodiversity issue will not stop at property boundaries-- it will eventually spill over onto private lands just like the wetlands and Endangered Species Act issues have." The environmental interests were interested in arriving at recommendations which the agencies could work with, and were therefore most concerned with a manageable scope to the discussions. Faith Campbell, however, felt that all federal agencies, including those involved with the Clean Water Act's Section 404 wetlands permitting process should be involved, thereby influencing management for biological diversity on private lands. The dialogue group concluded that including private lands made the issue too large to be handled. Regardless, they did highlight the

importance of activities on private lands in the protection of biodiversity with this conclusion in the final report:

While the federal government can address the issue of biological diversity most directly on public lands, documentation of the magnitude and distribution of features of biological diversity cannot be achieved without inventory and monitoring of natural biological communities and ecosystems on a national scale.⁷

The objectives of the dialogue were further clarified through a brainstorming session at the first plenary meeting. It was decided that the following issue areas would be focused on through small work groups facilitated by Keystone Center staff:

- A Research and Data Work Group, facilitated by John Huyler, to address needs and goals in increasing scientific inventory monitoring and data management;
- A National Policy and Coordination Work Group facilitated by John Ehrmann, to address broad goals and objectives at the national policy level for biodiversity in areas such as research and interagency coordination;
- A Management Work Group, facilitated by Connie Lewis (also Project Director) to address field objectives of the various agencies for biodiversity, as well as management strategies for achieving these objectives, and indicators of success.

While the management work group began by crafting a problem statement, generally the work groups began with critiquing current agency activities, followed by developing recommendations of what was needed.

The substantive issue areas discussed in the Dialogue included: strategies for maintaining viable populations, genetic variability, and representative examples of ecosystems, biological communities and habitats; current and needed efforts in inventory, monitoring, research and data management; national policy direction; interagency coordination; and training and resource needs of the individual agencies. Despite the breadth of the issue being discussed, the formal sessions of the Dialogue stayed within the planned time frame of one and one-half years. Following the November steering committee meetings, five plenary sessions were held, with the smaller work groups meeting in between. During the work group sessions, participants, on a smaller group or individual basis drafted and redrafted language of different sections to comprise a final report. Material developed in the small group sessions was brought before the larger group for further discussion and changes. The meetings occurred as follows:

⁷The Keystone Center, Biological Diversity on Federal Lands: Report of a Keystone Policy Dialogue, 1991, p.6.

Meeting Chronology

- March 29 - 31, 1989 **Plenary 1**, Washington, DC.
- May 22, 1989 Management Work Group, Washington, DC.
Policy Work Group, Washington, DC.
- June 5-6, 1989 Data Work Group, Washington, DC.
- July 10 - 12, 1989 **Plenary 2**, Keystone, CO
- September 19, 1989 Management Work Group, Washington, DC
September 22, 1989 Policy Work Group, Washington, DC.
September, 26, 1989 Data Work Group, Spokane, WA
- November 1-3, 1989 **Plenary 3**, Keystone, CO
- January 4-5, 1990 Data Work Group, Washington, DC.
January 8, 1990 Management Work Group, Washington, DC.
- April 18-20, 1990 **Plenary 4**, Keystone, CO

The shaping of each issue area into written sections for a final report was spread over this time span, making it difficult to isolate specific topics that were discussed at each meeting.

Dynamics and Controversial Issues in the Dialogue

All participants interviewed recognized the polarized nature of the biodiversity issue and commented on how it played out in the dialogue. Coalitions formed along predictable value lines: the environmental concern for commitment to preserving what is left of biodiversity, versus a more extraction-oriented view that it was the "exploitation and not existence alone" of biodiversity which made it important for humans and that it was necessary to integrate ways in which extractive activities could be carried out that were not detrimental to biodiversity. Ted LaRoe of the U.S. Fish and Wildlife Service, a participant in two previous Keystone Dialogues, noticed a much greater splintering of groups in this Biodiversity Dialogue. Connie Brooks noted that "the dynamics were intense." She also noticed a level of arrogance in some participants: "Corporate people are used to teamwork. However scientists are cloistered and they were condescending--insults were common."

These coalitions clearly played a role in the substantive outcome. As John Heissenbuttel of the American Forest Council described it: "the important thing is to get your language on the flipcharts, and it helps to have what you are saying supported by others around the table, as well as getting their observations." Connie Brooks, having

also participated previously in a Keystone Center Dialogue, realized that coalitions were an important means for educating others on the process who were naive to the effect it could have. Coalitions often strategized outside the meeting room, frequently developing their own agreement and contacting The Keystone Center after a plenary or work group meeting wanting to reword their position.

Throughout the dialogue, conclusions on several central issues for the final report underwent a variety of revisions. Summaries of each meeting would be drafted by a smaller representative group of individuals. These summaries would then be brought back to the full group where they were redrafted into a form that the entire group "could live with."

The problem statement was one example of the difficult issues with which the group struggled throughout this drafting process. This section was to give an overview of the status of biological diversity and the extent and rate of its decline, the threats contributing to this decline, and the importance of federal lands in this equation. As Ted LaRoe of the Fish and Wildlife Service stated: "we'd wrangle for a day on what verb to use: 'protect', 'preserve', 'maintain'...arguing over trivia brought out mistrust." Carl Hess of the Public Lands Coalition felt the definition issue was being avoided: "the agency and environmental interests seemed certain they knew but they didn't want to define it."

John Heissenbuttel of the American Forest Council felt that the question of adequate data to assess the problem was not addressed well enough: "The environmentalists are doing alarmist rhetoric-- 'loss is happening at a rapid rate'--we don't think there's enough good data and we need to focus more on quantifying the resource." Brooks pointed out, that "uncertainty was less troubling for scientists (they are used to living with it), and industry is more bothered by changes in theories." Others felt that there was adequate data, for example through The Nature Conservancy's Heritage Network, and that the environmental groups and agencies had a lot more data than industry was aware. Some noted that expertise was not brought to the table to specifically analyze the extent to which the issue was quantified and, as Ted LaRoe stated, "the big question was 'so what?'--how are you going to use [the data] on federal lands?" Environmental group participants wanted to strengthen the problem statement, perceiving that there was not a lack of data but a lack of belief that loss of biodiversity was a problem. The language of the problem statement continued to be a contentious issue, splitting the industry and environmental sectors well beyond the completion of the Dialogue.

Another similarly polarized issue involved the role of human activity on lands important for biodiversity conservation. Industry representatives described working hard to include language that stated the importance of human presence and needs, because they felt that people's needs precluded some management options. Heissenbuttel described the inclusion of this language as a big step for the environmentalists, who he believed were not working towards integrating commodity uses but rather were focusing on conserving biodiversity through land set-asides and acquisition. Some environmental

group participants perceived that commodity groups felt that government was already too constrained in the use of public lands, fearing a blanket closing of public lands nationwide. Though language was included in the final report concerning the importance of human needs, NFPA member participants described it as "not taken to heart" by the environmental group participants.

The fact that legislation was being drafted in Congress was clearly influential in bringing various parties to the table. Whether or not there was a need for legislation was a primary issue of discussion until the end of the dialogue. As described earlier, various individuals were interested in how the dialogue might influence the legislation and came in with specific intentions concerning it. However quite early in the dialogue, industry representatives made it clear that they would not sign a document which called for legislation, since they felt that existing mandates were sufficient. Heissenbuttel felt that "the environmentalists are hung up on need for legislation. Until they back off from this we can't have a consensus document." Legislation, he felt, would lead to decisions concerning biodiversity conservation to evolve from subsequent lawsuits. He felt that the scientific data was inadequate at this point for judges to be able to make such decisions. Connie Brooks noted that it was easier for commodity interests to deal with the existing framework of legislation. Environmental interests and some agency representatives, however, felt there was a need for legislation that was strongly protective of biodiversity.

An Executive Order had been crafted for a national wetlands policy and some industry representatives at the Biodiversity Dialogue felt this mechanism would work for biodiversity as well. Recognizing the need to respond to the growing public visibility of the issue, industry representatives supported the recommendation of an executive order. The environmental participants increasingly recognized the impossibility of achieving consensus on the issue of a legislative or executive order. Compromising in the second-to-last plenary meeting, the group agreed to recommend an executive order in lieu of legislation in the report. However, by the last meeting, commodity interests withdrew their support of this agreement. Non-industry participants speculated that, in the spring of 1990, industry participants became wary seeing that President Bush's statement of "no net loss" of wetlands (which later became an Executive Order) was being translated into strong legislative language through the 1990 Farm Bill and several coastal wetlands protection bills. Although at this time President Bush had not produced an executive order, industry representatives perhaps felt these events could lead to a policy being set in place on biodiversity. The final decision for wording on this recommendation in the Dialogue report was to describe the differing views over legislation:

Some believe that sufficient authority and administrative direction already exist and that conservation of biological diversity has already become, or is in the process of becoming, an important consideration in federal agency planning. While recognizing that this is true others believe that federal agencies need a clear signal from elected officials through either an Executive Order or legislation that maintaining

biological diversity is an important public policy objective that should be vigorously pursued.⁸

Views on new land designations and acquisitions were also polarized. They were supported by some who felt that these were effective ways for agencies to better implement biodiversity management at a landscape level, and were "essential for finding the compatible balance between maintaining and restoring biodiversity and providing for other human needs".⁹ Others felt the spirit of cooperation between private and federal land owners for protection would be dampened by the threat of land withdrawals, that set-asides did not necessarily translate to increased biodiversity, and that federal acquisition of lands was a fiscal impossibility. Commodity interests viewed such designations and acquisitions as another way that resource supply would be restricted. Consensus was not achieved and the opposing views were described in the final report.

Two other main points of contention were whether or not to recommend additional resources be allocated to agencies for biodiversity management, and the recommendation for a Federal Biological Diversity Policy and Coordination Committee to be formed by the President. Industry participants were wary of increased appropriations to be allocated specifically to biodiversity, whereas environmentalists were interested in language emphasizing this potential need. As written, the report recommends that agencies "undertake an assessment of human and financial resources needed" to undertake activities related to biodiversity conservation.¹⁰ The Policy and Coordinating Committee which would review existing programs and encourage management for biodiversity was perceived by industry participants as another unnecessary layer of federal bureaucracy. However other interests at the table felt strongly that this was a good idea and it was included in the report.

Events Following the Conclusion of the Formal Dialogue

By the end of the final plenary in April 1990, a final draft of the report had been written. In mid-May, The Keystone Center sent a clean copy of this final draft to all participants for their comments. On June 15, 1990, an implementation committee meeting was held involving representatives of the different interests. The Dialogue group had decided that it would be important to plan an effective means for making the document public, highlighting its importance. The implementation committee discussed strategies for publicizing the report, deciding that a team of individuals representing industry, environmental interests and an agency perspective should present the report and its recommendations to the highest level agency officials. Upon further discussion of these agency briefings, the group decided that it would be even more effective if the individuals making the presentations were higher level executives of the participant

⁸Ibid., p. 13.

⁹ Ibid., p.23.

¹⁰ Ibid., p.19.

organizations than those present at the Dialogue. Following on this idea were plans for a series of briefings to Congressional staff and the media. The group also proposed that The Keystone Center facilitate an implementation committee to meet and monitor how well the Dialogue recommendations were being carried out by the agencies.

Following this meeting, John Heissenbuttel approached the President of the National Forest Products Association with this idea. At this time the consensus in the draft report began to unravel. Those individuals in the Dialogue whose companies were members of the NFPA described getting pressure from within the NFPA not to sign the document. Some members felt that the report did not advocate strongly enough the review of existing mechanisms within the agencies for conserving biodiversity and that the Report would only further constrict timber supply. John Heissenbuttel played a central role in contacting the commodity interests to meet to discuss the report in Denver on July 11, 1990. Connie Lewis and John Ehrmann of The Keystone Center attended the meeting, hearing the concerns of the eight people gathered there, and concluding that their concerns might require further redrafting of the report.

On August 7, 1990 a smaller group representing all interests met to draft compromise language. The group was mainly self-selected, but John Heissenbuttel and Faith Campbell played a key role in organizing who should be there. The environmental interests meanwhile had already met in Washington, D.C., reflecting on what they had heard had been the result of the commodity meeting. The changes made at the August meeting consisted of wording changes. For example, there was a softening of the critique of industry's efforts to date with wording changed from "inadequate" to "not completely adequate," and wording added to increase the importance of the role of humans. In exchange, the environmental interests gained stronger language in the problem statement concerning the high rate of biodiversity loss.

In late August a compromise draft was circulated. Afterwards, Carl Hess of the Public Lands Council and rancher David Little (former President of the Idaho Cattlemen's Association) informed Keystone that they were opting to withdraw and not sign the document. They felt it did not adequately address their beliefs against increased government intervention into land use decision making. At this time also, David Wilcove of The Wilderness Society decided not to sign the document. He felt that the report did not adequately express his beliefs because there was not a consensus on what he felt was the great magnitude of the problem and the necessity for significant changes in the status quo:

The document has goals and objectives heading in the right direction for biodiversity, but if you read it they are all hedged in terms of "where practicable" and "where attainable"--there are enough qualifiers such that the extractive industries can maintain the status quo...nowhere is biodiversity a goal above other goals.

October through December, NFPA held meetings to examine the content of the report, eventually deciding that they needed to formulate their own strategy concerning biological diversity and then decide whether NFPA members participating in the Dialogue should sign the document. As Loren Hicks described it, the industry as a whole did not have a clear strategy concerning biodiversity. In January 1991, The Keystone Center received the final decision from the three NFPA members that they would not be signing the document. They cited three primary reasons: they "sense a serious lack of commitment from many Dialogue participants" to promote the concept of supplying human commodity needs as part of a strategy for federal lands; "land withdrawals should not be promoted as a significant or responsible means to protect biodiversity; and sufficient legislation and authorities exist to ensure conservation of this nation's biodiversity."¹¹

Upon hearing this news Humke, Campbell and Cutler, participants from environmental groups, considered not signing the report, angered at the concessions they had made for the final compromise draft which were now unnecessary. At this time Connie Lewis contacted all the participants to find out how they wanted to proceed, and several options were considered: publish the report intact, reconstitute the group and redraft the report, or publish the report as a working paper. The final compromise was to proceed with printing the report in its current form. Participants felt that there were still several members of the group who represented commodity interests, and therefore the consensus still carried weight. A redrafting of the report to strengthen some environmental concerns could lead to losing the remaining commodity representatives. Two years invested was another incentive to publish the report. Group members did not want to erase the product of much time and energy. In addition it was felt that there were many good recommendations in the report, and agency individuals expressed to the environmental interests who were hesitant about signing that without at least environmental and agency individuals signing the report, existing programs oriented towards biodiversity preservation would be threatened. Consequently, all remaining participants signed off on the report.

The report was published in the spring of 1991, and made public during three briefings in April. The first briefing was to a small gathering organized by Fernando Blackgoat, a Dialogue participant from Exxon, primarily for interested industry representatives. The second briefing hosted by the Energy and Environmental Study Conference, was oriented towards Capitol Hill staff, the media, and other interested people in Washington, D.C. A third briefing was hosted by the Council on Environmental Quality and consisted of officials from the White House, the National Science Foundation and numerous agencies including some not present at the Dialogue. In May 1991, several Dialogue participants from the different perspectives testified at hearings for Congressman Scheuers' National Biodiversity Conservation and Environment Research Act, where many references were made to the Dialogue Report.

¹¹ Letter from NFPA members John Heissenbuttel and David Ford to The Keystone Center, February 8, 1991.

Other implementation ideas were not carried out for various reasons. Though agency individuals were enthusiastic to promote the report others were less so. The fact that the individuals from the NFPA did not sign caused some individuals to feel the weight of the report had diminished and they felt less of an incentive to promote it. Also, The Keystone Center had exhausted its budget for the Dialogue which they had hoped would carry them through the implementation phase. Connie Lewis mentioned that pursuing people's interests in implementation follow-up activities to the Dialogue was not a closed issue. However, the Keystone Center had questions as to its own role in the implementation phase, in light of its neutral position.

The Effect of External Events on the Dialogue

If we'd done it about six months earlier we probably would have succeeded...If the spotted owl issue had broken one or two years later down the line I think the timber groups would have signed the report.
(Rodemeyer)

The Thomas report on spotted owl management became public in late spring of 1990, and the "no net loss" of wetlands Executive Order had also been released by then. It was at this inauspicious time that The Keystone Center was asking industry participants to sign off on the Dialogue report calling for an inter-agency Federal Biodiversity Policy and Coordination Committee to be designated by the President. However, the inter-agency approach that had produced the Thomas Report had "put a bad taste in industry's mouth" and, according to Heissenbuttel, the Dialogue report would have been easier to sign if those other events had not been occurring at the same time. He described the combination of these two events with the Dialogue as "bad timing." As Loren Hicks described it, the northern spotted owl issue had reduced the desire to "work with folks in the Dialogue process while we were getting sued by others in their organizations on the same issue elsewhere." Moreover, by not signing, industry has greater flexibility in interpreting the report later. Should Congress draft legislation based on the report, then industry participants would not be held accountable by their constituency.

A key concern raised by the refusal of several group members to sign the final report surrounded the validity and relevance of the Keystone ground rule: "Participants attend as individuals." As Faith Campbell put it: "a couple major players stormed out which makes me wonder about whether the 'individual' premise works." Some felt that the problem was rooted in The Keystone Center's desire to include the name of the participant's organization in the report. Some acknowledged that everyone brings in an agenda and is representing their organization's values, and that there was no way to get around that. As Hess described it: "Keystone makes an effort with ground rules of 'individual' and 'open' but it didn't work--we were representing the groups we work for." One individual described it as a problem for those who had the burden of not being secure enough in their employment. Others felt it had been a mistake to involve people from trade associations, in light of the events that occurred, instead of having companies directly involved. As Mike Rodemeyer commented: "There's always a question about

authority and how much can these guys can really bind...considering the diverse membership of trade associations." When interviewed, Loren Hicks readily acknowledged that he was representing the forest products industry. He did not feel he could sign even his own company name, because it would have put the industry in an awkward position of accountability: "All individuals there were representing their organizations... but it was very hard for me because I was the representative of all the NFPA...a very diverse set of views." Readers of the report might assume the industry as a whole was behind it, or would have wondered why more companies did not sign on. Connie Lewis of The Keystone Center supported the inclusion of trade associations in the Dialogue process. Because the National Forest Products Association was such a major player in commodity uses of federal lands, Lewis felt that their absence would have been noticed and there would likely have been a concern that the organization be represented there.

The reactions of other group members to the decision of these individuals to not sign the report revealed varying expectations of what would be the report's likely effect. Environmental interests hoped for larger scale political successes through a Dialogue report which both advocated legislation and contained a strong statement of the problem. Agencies wanted procedural clarification and legitimation for on-the-ground activities. Some were sympathetic to the position of the forest products participants. Mike Rodemeyer noted: "The issue was changing on them while they were in the Dialogue and that's not something you can foresee." However, some considered industry's decision not to sign the report as "unethical" and as "harmful to their position." Several environmental participants were angered at the industry individuals who had "extracted a lot of concessions from everyone else," and they also considered not signing. Most expressed regret at the timing because of its implications for the report's impact on the Administration. There was also disappointment in what some saw as a weakened document because of the push to compromise. Some participants believe these last minute compromises undermined efforts at implementation. Several expressed how close they had gotten to consensus. Campbell felt that if industry had signed the report and if the original implementation idea had been carried out by a "team of three" presenting it to the Administration, President Bush may have endorsed it. As she saw it "none of the goodwill or understanding that developed during the Dialogue is apparent now."

Disappointment at the lack of higher level implementation was also evident. As Rodemeyer described: "What is this politically? This is now just another document, as opposed to something the Forest Service can take in to the Secretary of Agriculture and say 'this is a document everybody has agreed on, this is a framework to build on.' Without the natural resource companies lined up on it, it doesn't get you anywhere to endorse it." On the other hand, Brooks felt the fact that there were non-signers did not affect the document's credibility.

Implementation

Despite these disappointments around desired outcomes, all participants interviewed, including several who had not signed the document, were very glad the report was out because it contained many good recommendations. The federal agency participants perceived the non-signers as not having diminished the validity of the document's implementation and they described areas where the report was being used.

Bureau of Land Management State Director Dean Bibbes described his use of the report:

we are embarking on a major planning effort in my district office--using it intensively--it's being used in our forest landscape model. At the time the Dialogue started the only place the concept of biodiversity existed was in reserved areas. Now, as a result of the Dialogue, aspects of managed landscapes have come to include biodiversity. There were key personnel from the different agencies there (in the Dialogue) and we became friends and can more openly discuss the issues.

Several agency personnel described ongoing activities with staff from other agencies or environmental organizations which had originated through their getting to know one another in the Dialogue.

Ted LaRoe described a "rump group" where Dialogue participants from the four agencies have called regular meetings among themselves to coordinate activities. Also, he felt the report's recommendation for "a comprehensive, coordinated inventory that serves to document all levels of biological diversity on the federal lands"¹² had generated the momentum for other agencies to begin adopting inventories similar to the Fish and Wildlife Service's gap analysis program. In addition he stated: "[The Dialogue] helped focus some issues in the Fish and Wildlife Service-- it gave individuals ideas and they're doing things they didn't do before, and I've used it for budget justification." He expressed disappointment, however, that the Report is not leading to significant change in coordination at the top management decision levels. Hal Salwasser felt the report gave the agencies considerably more specificity to work from than did the earlier report released by the Office of Technology Assessment. In particular, he felt that the language on cooperation gave them a useful framework, the results of which can be seen in a biodiversity task force in the lake states, and in BLM modifications of resource management plans.

Non-agency participants also believed that the agencies had probably benefited the most from the Dialogue, although some mentioned that it is difficult to trace back some activities as resulting from the Dialogue itself. Moreover, Faith Campbell felt that "what is described in the report as to what land managers should do is vague." As she queried, "measurable indicators'--what are they?" Rupert Cutler was disappointed at the

¹² The Keystone Center, Biological Diversity on Federal Lands: Report of a Keystone Policy Dialogue, 1991, p. 38.

lack of specifics on current model programs, next steps and timetable for implementation. David Wilcove did not feel the dialogue had made a profound difference in management activities. On the other hand, Connie Brooks stated that "there was a push in the Dialogue concerning adequacy of agencies bettering of what they can do and could do. The agencies got the sense that they were already doing good things -- it made them aware they did not need legislation. Agencies are doing a lot better job than they are willing to talk about." Others emphasized that it had brought a greater understanding among agency officials and that internally it helped "solidify" and bring more clarity to the agencies. According to Mike Rodemeyer: "Some of the agency people understand some more of the context and what needs to be done." John Humke described it as: "key people were thinking and articulating ideas to deliver to heads of agencies which was good. It contributed to agencies making their own decisions."

Positive Outcomes Described By Participants

Participants described various positive outcomes that they had experienced. Virtually all cited that one of the primary positive outcomes was making contacts and learning from the others in the room. In considering the substantive outcomes of the Dialogue, it is important to remember the meeting context. Coming together for several days of discussion had its less formal social aspects, where individuals who were on different sides of the issue got to know each other personally. This interaction was described as fundamentally important to the consensus building process.

Wilcove described having a "more realistic sense of how you go about trying to change an agency." John Humke stated: "The Dialogue was very useful to me: it is a great way to network. I have continued to enjoy and benefit from it. It was very helpful to work amongst ourselves on the issue." John Heissenbuttel also described ways in which he had benefitted:

I got to know the principal environmentalists so we talk now. Having the language that "human needs must be included" was a big step for the environmentalists, though all the recommendations do not reflect this...it was a wake up call for industry -- industry now sees biodiversity as a legitimate issue and resource, and it prompted industry to give marching orders-- to be positive and not negative about it. In industry they are evaluating forests more holistically-- they are explaining more that they benefit all resources rather than assuming the public knows this.

Loren Hicks described it as a clear signal to the industry that biodiversity was "not going to be a spectator sport." Brooks noted that the "process makes others feel better--it's a positive contribution--we won't be hurt by it and it promotes things." Carl Hess, felt the document contributed to the concern of the National Cattleman's Association and that the points he raised about greater reliance on locals "would not have been in the report if I hadn't been there so I'm glad I was. I hope the recommendations in the report have an effect."

David Wilcove felt there were some well thought out goal statements such as maintaining viable populations and multiple examples of natural communities. Since these were considerations that would continue to be raised in the biodiversity debate, having them in the report gave them credibility.

Issues Concerning Participation

Nearly all participants interviewed felt certain interests were not well-represented in the Dialogue, most notably state officials and local government officials. As Carl Hess put it: "when you're talking about the nitty-gritty issues, you need more on the ground individuals: local grassroots environmentalists, state fish and game, and on the ground agency people." He felt the Dialogue emphasized the perspective of the Washington, DC. "in groups" and lobbyists. Connie Brooks also felt there was a "highly biased" selection of participants: "Because the science community is political, you can't expect just any scientists to be good." Both Humke and Hess expressed a certain amount of discomfort at what they saw as the "presumption" that this group would have all the answers. As Humke put it: "it was not representative of the country at large...I'm not sure the right players were there...Keystone tries to get key people together in order to build consensus, but with this group it was probably not possible in the first place." When this gap was noticed at the first plenary meeting, The Keystone Center did try to obtain state and local official representation. They were unsuccessful, however, and the Dialogue progressed too far to bring in new individuals.

The Dialogue's Effect on the Biodiversity Issue and Congressional Activity

Opinions about the effect of the dialogue on legislation in Congress were more negative than positive. As Rodemeyer described it:

Whereas this was seen as pretty benign two years ago, the buzzword now is politically charged and it's exactly the kind of thing we hoped initially that we would have been able to avoid...we thought it would be an endorsement of what was already in (Congressman Scheuer's) bill. In fact, just the reverse has happened, both the wetlands issue and spotted owl issue are having significant political backlash.

John Heissenbittel perceived other effects of the report:

Scheuer attempted to use the Keystone Report for legislation this year-- it didn't work--he tried to focus on individual recommendations rather than the whole document. So it actually helped non-legislation interests rather than the environmentalists. The anti-legislation camp can use the opposing argument of "it is not adequate because it does not include all the recommendations."

As described earlier, the proposed Congressional legislation also had its effects on the Dialogue. Several participants felt the environmentalists were looking to the legislation if they failed at the Keystone Dialogue, thereby minimizing their stakes in the consensus process. Wilcove, however, felt legislation was an incentive to stay in the Dialogue, since Capitol Hill staffers had said that a good Keystone Report would be useful in getting a bill through Congress.

There were mixed feelings about the effect of the Dialogue on the larger debate surrounding biological diversity. Several described biodiversity as "too abstract" and remaining "muddled." Others felt that positive outcomes at the operational level were not visible at higher policy levels, and that the direction of the debate had not changed nor had the issue been brought to national consciousness.

Views on the Process

Comments on The Keystone Center's facilitation of the Dialogue were very positive; facilitators were described as both knowledgeable in the issue area and very skilled in making sure all participants had equal opportunity for input in the discussions. Some individuals, however, found the process frustrating, believing that Keystone was sometimes overly sensitive to the need to draw a consensus from very polarized people. For example, Ted LaRoe felt too much time was spent on defining the problem, and that "Keystone should have made a decision and moved on, rather than pushing so hard for consensus."

Implications for Endangered Species Disputes

When asked for their opinions about the implications of the Keystone process on endangered species disputes, most felt the process might work at a less "abstract" level and suggested the following three criteria: 1) all parties involved needed to be at the table; 2) individuals needed to have the incentive to work towards consensus; and 3) the issue needed to be less polarized. There was general agreement that all parties needed to have sufficient incentive to work towards consensus. It is interesting to note, however, that there was a difference in perception by the parties about their respective stakes. As Faith Campbell described it:

Unless all interests in the room have a real feeling that it's important for them to resolve, and this is their best (or ideally only) way, then it might work. It's too easy for the side that holds the cards to call the shots --here they extracted a lot of concessions from everyone else. The grazing and timber interests have enough influence that they don't have to act outside the Dialogue.

By contrast, Carl Hess felt that:

The problem is people not only come in with their ideologies but with mistrust and antagonism--both sides feel the other is out to get them. You have to get over this. The issue has to be a high stakes issue for all sides, then maybe they will be forced to trust and develop alternatives...they have to live with each other. Here the environmentalists felt they were in the driver's seat with legislation happening on the hill, therefore the process was not so vital-- but maybe if the situation was different --environmentalists would feel more at stake. Biodiversity is still too abstract--the stakes are not high enough.

The need for the issue to be less polarized in order to be successfully negotiated was suggested by Connie Brooks:

This type of dialogue is more suitable for site specific issues but you need an issue that is not totally polarized. Some endangered species disputes are getting that way, like in Oregon-- there's no incentive to negotiate. But in others there is still fairly even bargaining power... there would have to be very clearly defined objectives which would make it easier; this is difficult to do with biodiversity.

Ted LaRoe however felt that:

Whenever you have an endangered species dispute you are going to have the same polarization. However, many times there is simply a failure to openly consider alternatives. Perhaps a Keystone Dialogue could help promote those.

Conclusion

Many participants suggested that outside events and a value-based polarization prevented the Dialogue from having the successful outcome it might have had. However, they still felt that the effort was a success in terms of networking and education, and federal agency participants said they were using the document in their respective agencies. Although some believed that the Biodiversity Dialogue was too large in scope, they still suggested that it was productive to have an informal opportunity to look at larger questions. As Rodemeyer described it:

This was very productive-- in asking: "what are the goals we are trying to achieve?" because those are the kinds of things people tend to take positions on but haven't really thought them out, and I think a Dialogue like this is just about really the only place where you can really do that sort of thing. When you get out, at least a little bit, of your institutional roles and say "okay, lets take a fresh look at this."

Ted LaRoe expressed the need to tackle larger issues which lie behind ones such as the spotted owl, such as timber management practices as a whole: "Things like this

need to be discussed out of the context of just spotted owl-- you can't solve the spotted owl issue or timber harvests without identifying these larger issues and they are not currently getting addressed." Hal Salwasser described what he felt was one of the big problems now:

that competing interests can beat up on the third party of federal agencies through duking it out and moving it to the courts or getting legislation to trump it...All this is destroying our ability to make community decisions. I have great hope that with consensus processes warring parties can be made responsible for solutions...If a third party could find common ground then it might work. It's essential to make it work because our policy decision making is devastated now--only non controversial decisions are being made.

While most participants feel that the Dialogue had little, if any, direct impact on subsequent policy or legislative efforts, they nonetheless felt that it was worthwhile for its educational benefits. Most believe that it helped them focus their thoughts on the biodiversity issue and enabled them to meet and get to know people on all sides of the issue, even if it did not result in consensus.

Sources

In total 55 individuals attended at least one meeting, with 47 signing the report and seven choosing not to sign. For this study interviews were conducted with the following individuals (positions are those held during the Dialogue):

Dean Bibles, State Director, Oregon and Washington, Bureau of Land Management

Faith Campbell, Senior Scientist, Natural Resources Defense Council

David Blockstein, Executive Director, Committee for the National Institutes for the Environment

Connie Brooks, Attorney, Davis, Wright and Tremaine

Rupert Cutler, President, Defenders of Wildlife

John Dennis, Chief, Research Branch, Wildlife and Vegetation Division, National Park Service

Gina DeFerrari, Professional Staff Member, Subcommittee on Fisheries and Wildlife Conservation and Environment, House Merchant Marine and Fisheries Committee

John Heissenbuttel, Vice President, Policy and Research, American Forest Council

Carl Hess, Marketing Specialist, Public Lands Council

Loren Hicks, Wildlife Biologist, Plum Creek Timber Company

John Humke, Vice President, The Nature Conservancy

Ted LaRoe, Director, Cooperative Research Units, U.S. Fish & Wildlife Service

Mike Rodemeyer, Staff Director, House Science, Space and Technology Committee

Hal Salwasser, Director of New Perspectives, U.S.D.A. Forest Service

David Wilcove, The Wilderness Society

CASE STUDY #5

TURTLE EXCLUDER DEVICES: Negotiated Rulemaking on a Politically-Charged Issue¹

"You show me any reason for a sea turtle. It's going to be a hard time for a man to let his younguns go hungry for worrying about a sea turtle. Mankind don't have any need for a turtle whatsoever...It's us against them now. I didn't spend my whole life getting what little bit I got to let a bunch of damn fools put me out of business."

(Jack Griffin, Executive, Cracker Seafood, Inc.)

"Perhaps some species were just meant to disappear. If it comes to a question of whether it's shrimpers or the turtles -- bye-bye turtles."

(Louisiana Governor Edwin W. Edwards)

"One of the nation's premier wildlife laws is being held hostage by petty parochial concerns."

(Jim Pissot, National Audubon Society)

The following case study describes the effort to collaboratively negotiate rules governing the use of turtle excluder devices (TEDs) on shrimp trawlers in the southeastern United States. The conflict between shrimpers and the provisions of the Endangered Species Act mixes reason with defiance and caution with violence. It is a classic case of environmental conflict. Fundamental differences about the value of the endangered sea turtle species separate the shrimpers and their representatives from the environmental community. Class differences permeate the case. Interestingly, while those advocating the use of TEDs to protect the turtles would most likely have won in court, they chose to cooperate and negotiate in order to avoid potential backlash to the Endangered Species Act. And the shrimpers, who in reality had very little power to avert the eventual use of TEDs, perceived that in the political arena they would prevail (as they always had) and chose to fight, rather than negotiate, a choice that the end analysis indicates harmed both them and the sea turtles.

While the negotiations that were attempted were not entirely successful and were followed by several years of political activity, the provisions of the negotiated agreement are strongly reflected in the final rules being enforced today. This case study illustrates the economic stakes, class and value differences, and emotions that pervade many

¹ This case study was developed by J. Alan Clark.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

conflicts involving endangered species and that undermine negotiations that would otherwise appear rational and promising.

1966-1978: Sea Turtles as Threatened and Endangered Species

Historically, sea turtles have been harvested for their meat, eggs, oil and shells. Products manufactured from sea turtles have included combs, boots, aphrodisiacs, soup meat and eyeglass frames. Demand for these products lead to mass slaughtering of sea turtles and plundering of their nests. In addition, development, erosion and beach activity eliminated much of the sea turtles' historic nesting grounds. Sea turtles are also subject to natural predation and disease. However, dredging, collision with boats, oil-platform removal, power-plant intake pipes, ingestion of plastics and other debris, pollution and shrimp trawling, all associated with human activity, are the primary causes of the decline in sea turtle populations.

On October 15, 1966, the Endangered Species Preservation Act (ESPA) was signed into law. Three years later, the ESPA was superseded by the Endangered Species Conservation Program (ESCP). The leatherback sea turtle (*Dermochelys coriacea*) and the hawksbill sea turtle (*Eretmochelys imbricata*) were both listed under the ESCP as endangered throughout their entire range on December 2, 1970. Later that same year, the National Oceanic and Atmospheric Administration (NOAA) was given jurisdiction over protection of endangered marine species, including those already listed under the ESCP. The Endangered Species Act (ESA) replaced the ESCP when it was signed into law on December 28, 1973. On July 28, 1978, the National Marine Fisheries Service (NMFS), which had been created within NOAA, listed two more sea turtles under the ESA. The green (*Chelonia mydas*) was listed as threatened in part of its range and as endangered throughout the remainder of its range, and the loggerhead (*Caretta caretta*) was listed as threatened throughout its entire range.

Because female sea turtles leave the water to lay their eggs, an interagency dispute arose as to whether sea turtles should be under the jurisdiction of the Fish and Wildlife Service (FWS) or the NMFS. In a Memorandum of Understanding, signed July 18, 1977, the two agencies agreed to joint jurisdiction. FWS would have authority over sea turtle activities on land, and NMFS would have authority over marine sea turtle activity. In support of that agreement, Jack Gehringer, NMFS Deputy Director, agreed to prepare a new budget to permit expanded study of the effect of fishing gear on sea turtles. In late 1977, as part of that study, NMFS held joint meetings with representatives of the shrimp industry and the environmental community to find ways to keep turtles from drowning in shrimp trawlers which would not hurt the shrimp industry. At this time, NMFS began work on developing an "excluder panel," a device which it hoped would keep turtles from being caught and drowned in shrimp trawling nets but which would not allow the shrimp to escape.

1979-1981: Center for Environmental Education Pushes the Turtle Excluder Device

In November of 1979, the Center for Environmental Education (CEE) (now known as the Center for Marine Conservation), a non-profit environmental organization, co-

sponsored the World Conference on Sea Turtle Conservation. That conference recommended that NMFS and the shrimp industry accelerate the development of a shrimp trawler that would preclude the capture of sea turtles. NMFS continued its research on development of such a device. The summer of 1980 saw huge numbers of dead sea turtles stranded on beaches. These strandings correlated almost perfectly with shrimping activity in the areas of the strandings.

These strandings were noted by the Fund for Animals (FFA) who quickly made the strandings public news. FFA was joined by 26 other conservation groups who called for NMFS meetings with shrimpers to let them know of the new excluder panels. FFA, in an August 22 press release in response to 1300+ sea turtle strandings, called for the following: "Turtle excluder devices to be built into the trawl nets which have been designed by the National Marine Fisheries Service and other turtle conservation operational techniques [to] be utilized as soon as possible." In response, NMFS held a "Sea Turtle Meeting" the following month in Charleston, South Carolina, to examine ways to reduce sea turtle mortality from commercial shrimping activities. At that meeting, NMFS told the attendees of their development of an excluder device. NMFS also issued emergency sea turtle resuscitation regulations in hopes that shrimpers would attempt to revive comatose sea turtles caught in their trawlers.

CEE had been considering filing suit to require NMFS to promulgate regulations to protect sea turtles from takings in shrimp trawling nets. However, CEE decided not to file suit in lieu of the techno-fix: the new turtle excluder device (TED). The following year, CEE began to privately fund manufacturers to build the TEDs using the directions and diagrams in a NMFS booklet. The Gulf and Atlantic Fisheries Development Foundation issued a brochure discussing the benefits of TED use. CEE then planned to give the TEDs away, but due to resistance from the shrimp industry, few TEDs were used during the 1981 season. NMFS was successful in getting a few South Carolina shrimpers to try the new TED. These shrimpers complained that the TED was too heavy. In response, NMFS reduced the weight from 97 pounds down to 37 pounds.

1982-1985: The TED Voluntary Use Committee

Convinced of the value of the TED, Michael Weber, head of CEE's sea turtle program, contacted various parties, including E.C. Bricklemeyer of Greenpeace, Ralph Rayburn of the Texas Shrimp Association and Bob Jones, Executive Director of Southeast Fisheries Association. In a February 11, 1982 letter, Weber asked them to be on a shrimp industry/conservationist committee whose goal would be the voluntary adoption of the TED. As an incentive to participate, Weber also informed these parties that NMFS was developing regulations which might require the use of TEDs. Rayburn accepted Weber's offer, but he qualified his acceptance by stating that he did not necessarily agree that the TED is the way to proceed on this problem. After getting other affirmative responses, Weber organized the first TED Voluntary Use Committee meeting which was held on May 4, 1982. Weber and Rayburn acted as co-chairs. This committee was informal in nature to avoid the red tape of being an official government

"advisory committee." The committee provided a forum for both sides to vent their concerns and to pass comments on to the NMFS.

During 1983, CEE and NMFS distributed free TEDs to shrimpers. In June, NMFS Staffmember Oravetz sent a memo to the TED Voluntary Use Committee which discussed the results of TED experiments. Upon an invitation from Weber, the Voluntary Use Committee reconvened again on November 14, 1983. At that meeting, the group reached agreement on a goal that within three years, 50% of southeastern shrimpers should be using TEDs and that 100% of shrimpers should be using TEDs in areas of critical importance to sea turtles. Follow-up meetings were held on May 3, 1984 and November 7, 1985. At the November 7, 1985 meeting, it was revealed that less than 1% of shrimping fleets had ever used a TED. The industry representatives (which only represented between 5-10% of the shrimping fleet) were unwilling to commit any percentage of their members to use of the TEDs. This was the final meeting of the TED Voluntary Use Committee.

Regional/parochial interests seem to have played a quiet, yet pervasive, role throughout this controversy. Apparently, shrimpers in one Louisiana parish had experimented with, and approved of, a variety of TED. When the device was shown to shrimpers in an adjacent parish, they refused to use the device as they would have nothing to do with anything from that other parish. Class and race issues were also subtle underpinnings to the vocal opposition to TED requirements. Class in terms of big government and environmental elitists against self-employed shrimpers, and race in terms of Southern outrage at federal subsidies to Vietnamese "boat people" during a time when cheap imported shrimp was eating away at the market.

1986: The TED Negotiations

Both FWS and CEE were disappointed by the failure of voluntary adoption of TEDs by the shrimp industry. In January of 1986, FWS and CEE went before the Gulf of Mexico Fishery Management Council and asked that it amend its fishery management plan for shrimp and require that TEDs be used throughout the industry at all times. The Council referred their request to a committee which referred the request to another committee and so on. Extremely frustrated with the Council's committee run-around, CEE went to NMFS in April and asked them to promulgate regulations requiring the use of TEDs under the ESA. In August, NMFS politely declined to promulgate any TED requirements. Shortly thereafter, CEE made it known to both NMFS and the press that they were considering filing suit against NMFS to compel them to promulgate regulations under the ESA requiring the use of TEDs.

Dr. Anthony Calio, Administrator of NOAA, in response to CEE's lawsuit threat, called for a meeting of environmental and shrimp industry representatives from the gulf to discuss the use of TEDs. Within a day or so of Calio's request for a meeting, NMFS unveiled proposed regulations regarding the use of TEDs which were to take effect on November 1. Because the proposed regulations left out a huge section of the Texas coast

where critical habitat was located, CEE was dissatisfied with the regulations. The next day, CEE served the Secretary of Commerce with notice that unless better regulations were proffered, CEE would file suit within 60 days, demanding that all shrimp fisheries be closed in order to protect endangered sea turtles. Dr. Calio quickly responded with an announcement that, instead of his promulgating a new NMFS regulation, NMFS would offer the parties an opportunity to negotiate a rule that would satisfy everyone. He promised to delay the November 1 effective date of the proposed regulations if the parties could satisfy him that they would negotiate in good faith. Meeting with some resistance, Calio actively worked with the parties and eventually persuaded them to meet.

The actual negotiations took place during 14 days in four cities over a seven week period. NMFS selected the parties it wished to participate, chose the mediator and paid the bills. The schedule was as follows:

October 16-17, 1986: New Orleans, LA
October 31 - November 2, 1986: Jekyll Island, GA
November 10-13, 1986: Washington, DC
December 1-4, 1986: Houston, TX

The participants were:

Mediator

Larry Cotter

Industry Representatives

Leonard W. Crosby, Jr., Bryan County (GA) Coop (Processor)
David Eymard, Texas Shrimp Association
Charles H. Lyles, Louisiana Shrimp Association
Tee John Mialjevich, Concerned Shrimpers of Louisiana
Robin Sanders, South Carolina Shrimpers Association
Eldon V.C. Greenberg, Counsel to Southeastern Fisheries Association

Environmental Representatives

Vance Hughes, Counsel to Center for Environmental Education
George J. Mannina, Jr., Counsel to Center for Environmental Education
Michael Weber, Center for Environmental Education
Milton Kaufmann, Monitor International, Fund for Animals
B.J. Jaidagian/E.C. Brickleyer, Greenpeace, Southeast
Michael Bean, Environmental Defense Fund

NMFS Representatives

Jim Douglas
Jay Johnson
David Cottingham

When the negotiations began, the environmentalists wanted to require the use of TEDs on all vessels in all waters at all times. They were primarily concerned with protecting sea turtles and secondarily with reducing fin fish by-catch. However, at the beginning of the negotiations, the mediator convinced the environmentalists to drop the demands about fin fish. The shrimp industry had mixed goals. Some Atlantic and Florida shrimpers were already using TEDs and had found them an efficient means of reducing fin fish by-catch and thereby reducing the amount of time spent sorting shrimp from fin fish. Other shrimpers were upset about government subsidies to Vietnamese shrimpers and wanted no further governmental intervention into their livelihoods. Shrimp processors were quiet, but they seemed to want to keep prices down and to show support for the shrimpers. The government clearly wanted to avoid controversy and lawsuits, though on the lower levels of NOAA and NMFS, there was also real concern for sea turtles.

Parties to the Negotiation

The participants were chosen by Dr. Calio. As noted above, there were three representatives from NMFS, six representatives from the shrimp industry and six representatives from the environmental community. Weber believes that the environmental concerns were fully represented, but he felt that this was not true for the shrimping community which had only about 5% of their numbers represented at the negotiations. According to Weber, each of the representatives had written authority to represent their organization: "We weren't going to negotiate with parties who couldn't negotiate and sign on behalf of their organizations."

Among the interested parties not represented at the negotiations were small boat shrimpers and North Carolina shrimpers. With time, it was these two unrepresented groups which engaged in the most pervasive and effective opposition to the negotiated agreement.

The Negotiation Process

Getting Started. The negotiations were initiated at the request and prompting of NOAA Administrator, Dr. Anthony Calio. Larry Cotter was selected as mediator by Calio, who had heard of his experience in consensus building efforts with the North Pacific Fishery Management Council. Cotter's prior experience in negotiation was primarily labor-management disputes. Calio also decided which parties were invited and encouraged to participate. NOAA paid the mediator's salary and expenses, covered the cost of the facilities and charged Cotter with its goal for the negotiations: a finalized agreement on turtle excluder devices which NMFS could adopt and promulgate as a

proposed rule. However, the negotiation process itself was entirely under the control of the mediator, Larry Cotter.

Meeting Locations/Physical Structure. Calio chose the location (New Orleans) for the first round of negotiations. Cotter then chose the remaining three locations and attempted to spread the meetings out: Jekyll Island for the South Atlantic representatives, D.C. for the government and environmentalists and Texas for the Gulf representatives. The negotiations were generally held in hotel meeting rooms. Cotter placed the parties around a rectangular table. Because of his self-perceived role as chair, Cotter placed himself at the head of the table. The government representatives sat at the opposite end, and industry and the environmentalists sat facing each other on opposite sides of the table.

Open Meetings. With the exception of private caucuses, the negotiations were open to the public at the direction of NOAA. Public attendance ranged from around ten to several dozen persons. Cotter felt that it was important to have open meetings for several reasons. Primarily, the open meetings served as an educational process: "One of the problems we had was there was a clear lack of comprehension on both parties' part as to the impact of what was going on." As an example, Cotter noted that there are 30,000 shrimpers. The shrimpers claimed that they may catch a sea turtle once a decade. He felt the environmentalists needed to hear that fact. But he also pointed out that if you multiply that figure by 30,000 shrimpers, you have a significant turtle catch, an important point that the shrimpers needed to know. Cotter also felt that the negotiations "caused everyone to start thinking about what they were doing. I think we also focussed attention on marine debris, degradation of coastlines, streetlights and all those things that have an impact on turtles." Cotter also believes that the open nature of the negotiations eased the burden for industry of reaching agreement: "The open meetings helped the public understand that industry was in a no-win situation. When the discussions were over, at least the industry representatives were able to maintain a sense of dignity. If the discussions had been private, then we would not have had that public education process, and I'm convinced each of the industry representatives would have been castigated, and their careers as representatives would have been done." On legal note, having open meetings helps agencies defend the process used to promulgate rules if lawsuits should ensue in the future.

Government Participation. At first, the government representatives attempted to take a very active role in the negotiations, but Cotter squelched this effort. He felt that the decisions needed to be made between the industry and the environmental community and saw the role of government as more of a provider of data and support services. The government also served the necessary function of letting the group know whether a proposal met with statutory and internal governmental regulatory requirements. Towards the end of the negotiations, however, Cotter began to use David Cottingham of NMFS as an assistant.

Goals. As a personal goal, Cotter attempted to gain the trust of the parties. Consequently, no actual negotiations occurred at the first round of meetings. The focus, instead, was on mutual education and relationship building: "I attempted to go through an education process . . . We outlined data requests. We asked for charts. . . . I encouraged both the environmentalists and the shrimp industry to articulate their perspectives. Then, what we would do, as a team, is take a look at each one of those perspectives, and then try and identify what type of data needs were necessary in order for us to establish the degree of veracity accompanying each of those perspectives."

Aside from beginning the education process and "avoiding a lot of chest beating," Cotter's primary substantive goal for the first meeting was to develop a problem statement that both the shrimp industry and the environmental community could agree upon. Cotter saw the problem statement as not only an educational tool, but also a means to control the future behavior of the parties: "Having agreed to a goal or objective which recognizes mutual vested rights, you then draw upon the integrity of each of the individuals on both sides and their desire to live up to the commitment they made when they agreed to that goal or objective. That gave me something then to use in the future if necessary to work on each of the parties if they started to deviate or become obstinate."

Mediator Style. Cotter sees two approaches to mediation: "(1) you can sit silently like in labor negotiations or (2) you can act as chairman of a joint committee of two opposing sides." He chose to run the negotiations as a committee. Cotter felt it was his job to structure the meetings: "it is the job of a successful mediator to 'guide' the parties down a particular path." He tried to make the talks as informal as possible: "I did my damndest to inject humor on a continuing basis so that the folks would enjoy themselves. That's one thing I learned in labor negotiations years ago. The situation is tense to begin with, and the folks who have the most success in labor negotiations are the people who just sit at the table and manage to make it fun."

Cotter's personality seems to be open. He is articulate and gregarious. During the negotiations he was quite active. If talks bogged down, he would send the parties out for private caucuses or have them work on joint projects, such as deciding what data was needed and how to divide the country into zones. Cotter actively worked the parties during their private caucuses and freely commented on the talks, arguments and proposals made by the parties. After he felt that a feeling of trust had been established between himself and the parties, Cotter felt free to "call 'bullshit' on both sides What I would do when someone would raise a question or advance an argument is sometimes let the other side respond. But sometimes I would respond and point out the fallacy of their perspective. I was doing this to prevent animosity from developing between the parties . . . I would [confront the antagonistic situation myself] when I felt it was appropriate rather than having someone else do it."

Incentives to Participate

The incentives to negotiate varied among the parties, but, in general, the parties can be categorized into three discreet groups: the government, the shrimp industry and the environmental community.

Government. NMFS was extremely interested in seeing these negotiations succeed. After all, it was their idea to negotiate. Their motivation to originally promulgate the 1986 rule was in response to a threat by CEE to sue. This was also the motivation for their call to negotiate. NMFS intimated to the parties that if the negotiations failed, the proposed rule would probably go into effect. NMFS believed that the parties would be less likely to sue if they had a stake in the makeup of the rule itself. Litigation is much more costly to the government than negotiated rulemaking in financial, time, and political terms.

Shrimp Industry. The shrimp industry clearly did not want to see the imposition of TEDs into their operations. They were facing a very real and increasingly dire financial plight. According to shrimper Ricky Matherne, "I need every shrimp I can catch. I can't lose not one percent. I'm talking about not losing a single shrimp." Many shrimpers feared that TEDs would force them out of business. The U.S. shrimp market has been vastly undercut by shrimp imports, resulting in substantially lower selling prices. Operating costs are higher than ever due to rising insurance and fuel costs. These factors have heightened pressure on shrimpers, necessitating that they trawl longer and with greater effort for subsequently increasingly limited resources. In one survey, shrimp captains saw their annual incomes fall from \$39,571 in 1985 to \$18,555 in 1989.

Alternatively, the shrimp industry really did not have much to fear at the beginning of the negotiations. They had negotiated with CEE in 1982 and had succeeded in doing nothing but give lip service for four years. After NMFS promulgated the 1986 proposed rule, the shrimp industry went into negotiations thinking that NMFS' proposed rule would be the worst they could do. During the second meeting in Washington, D.C., the talks began to break down when the environmental community began to demand more than was in the proposed rule. Cotter called in Dr. Calio who spoke privately with the shrimp industry representatives and let them know that NMFS was withdrawing the proposed rule because it was clearly insufficient. He also explained the exact consequences of the more likely rule which would be promulgated in the event that the negotiations failed. The shrimpers returned to the bargaining table.

Environmental Community. In 1980, after NMFS revealed its development of the TED, CEE decided not to file a suit it had been considering in order to get regulations protecting sea turtles promulgated under the ESA. In 1983, CEE representative Weber co-chaired the TED Voluntary Use Committee. The agreement reached by that Committee provided for a goal that 50% of southeastern shrimpers should be using TEDs and that 100% of shrimpers should be using TEDs in areas of critical importance to sea turtles. The shrimpers never got anywhere near the goal. CEE's Donnelly has mixed emotions about the decision to negotiate in 1983 rather than sue: "I think it's too bad we didn't decide to sue back in 1983. If we had known in 1983 what we knew in 1986, we

would have sued in 1983." CEE's decision to negotiate rather than sue in 1986 was again the desire to avoid litigation if possible. CEE believed that an agreement reached with everyone would be better than one forced on the parties by the courts. Also, being asked by Dr. Calio provided legitimacy to the process that was not present in 1983. Clearly though, CEE's threats to file suit against the NMFS provided much motivation for NMFS.

Reaching Agreement

As the negotiations began to wrap up and a tentative agreement was being reached, the parties began to discuss how they would endorse the agreement. In Cotter's words: "Folks were trying to figure out how they were going to sign: as an individual or as a representative of their organization. There was talk that 'heck, I have to take this agreement back to my association and receive authorization before I can sign it.' Well, I wasn't about to let that happen, simply because I needed signatures, I needed commitments. If we had allowed the parties, including the environmentalists, to take the agreement back to their various organizations for ratification, I'm certain that it would have been rejected by various entities. That would have destroyed the process." Eventually, with the exception of Mialjevich, all the parties signed the agreement with the name of their organization under their signature.

By the afternoon of December 3, 1986, all of the parties had agreed to sign onto an agreement on the use of TEDs with the exception of Tee John Mialjevich of the Concerned Shrimpers of Louisiana who claimed the agreement was too tough for his constituents. The parties kept working through the evening and finally reached an agreement where, if Mialjevich would sign the agreement, a special provision would be inserted into the agreement lessening the phase-in and actual requirements for Louisiana. If Mialjevich did not sign, the "Louisiana Variable" would be dropped from the agreement. Mialjevich consented, and the parties agreed to have a signing ceremony the next day. Unfortunately, at 2:00 am, Mialjevich received notice that his mother had died, and he immediately left for Louisiana. The remaining parties signed the agreement. Two weeks later, Mialjevich announced that he would not be signing the agreement, and the special Louisiana provision was dropped from the agreement. He became the leader of the nationwide movement against the agreement and the subsequent regulations promulgated which were based on that agreement.

The act of signing the agreement apparently tempered the future activity of the signatories. According to Cotter, they seemed hesitant to break the bind of their signature. As Mialjevich did not have this constraint, he was much freer to reign havoc on the whole process. Cotter also mentioned that some of the shrimp industry representatives took a lot of heat from their organizations: "It may have affected their careers and subsequent involvement in the industry adversely. But I think they were very credible individuals with high integrity and only signed on because they believed they had done the best they possibly could under the circumstances, and that it was the best for the industry." After David Eymard of the Texas Shrimp Association returned home from signing the agreement, "all hell broke loose." Despite having earlier signed a letter

designating Eymard as their representative, the Texas Shrimp Association sent a letter stating that they had never given permission for Eymard to negotiate on their behalf.

Implementation

During the negotiations, Cotter thought that implementation would be forthcoming: "I was looking backwards to the Boldt decision in Washington State where the feds moved in and nailed a couple of guys who were fishing in violation of the Boldt decision. That decision had been preceded by massive threats of civil disobedience. After a couple of guys got nailed (and really badly), I think everybody in Washington State learned that the better part of wisdom was to comply. It was my assumption that a couple of guys were going to get nailed seriously in the Gulf of Mexico, and we would see a similar type of compliance mode thereafter."

1987: Promulgation of Shrimp Trawling Requirements

NMFS published its proposed rule on shrimp trawling equipment on March 2, 1987. These rules were based on the December 4, 1986 negotiated agreement. NMFS held 17 hearings attended by thousands of people. Following publication of the proposed rule, hearings were scheduled in both Houses of Congress on ESA reauthorization. Busloads of angry Louisiana shrimpers descended on Washington to attend the hearings. The Attorney General of North Carolina threatened to file suit if regulations pursuant to North Carolina were not dropped from the proposed regulations. North Carolina was the only state affected by TED regulations that had not been represented during the negotiated rule making. Since North Carolina represented the top fringe of the shrimping grounds and a small percentage of commercial shrimpers, they were not deemed an important party to the negotiations, an obvious miscalculation. NMFS temporarily dropped out the sections of the proposed regulations which dealt with North Carolina. On June 29, 1987, NMFS published its final rule. Changes were made from the proposed rule, but the final rule still retained the essence of the negotiated agreement. The final rule was to become effective starting from October 1, 1987 and continuing through May 1, 1988.

Many groups were unhappy with the final rule. In August, Tee John Mialjevich decided to expand his organization and formed a national version: Concerned Shrimpers of America. In October, the State of Louisiana, along with intervener Concerned Shrimpers of Louisiana, filed suit in federal district court challenging the validity of the final rule.

1988-1989: Judicial, Administrative and Congressional Intervention

Activity in the courts over the final rule became heavy during 1988 and 1989. In February of 1988, the Federal District Court for the Eastern District of Louisiana ruled that the final rule was not arbitrary and capricious and that the final rule would become effective March 1, 1988. Louisiana, which had filed the suit, appealed, and in July 1988,

the Fifth Circuit Court of Appeals affirmed the lower court and stated that the final rule would now become effective September 1, 1988. In its opinion, issued on August 14, 1988, the court stated that "If the tradeoff between marine life and economic success has been skewed in the wrong direction, it is for the legislative and executive branches, not the court, to correct that imbalance." (Louisiana ex rel. Guste v. Verity, 853 F.2d 322, 331, 332, f.n. 20)

Congress took this admonition to heart. On August 22, 1988, the President signed into law a measure which would prevent the final rule from becoming effective until September 17, 1988, by which time Congress hoped to have completed the reauthorization of ESA. The TED requirements comprised a central point of contention in the ESA reauthorization debates, and it was not until October 7 that ESA was amended, reauthorized and signed into law. The amendments to ESA delayed the effective dates for the final TED rule until May 1, 1989 for offshore areas and until May 1, 1990 for inshore areas. Because of statements like that of Senator Heflin (D-AL) who went so far as to say that the Ridley turtle was not even endangered, the amendments also mandated a study of the issue by the National Academy of Sciences (NAS) which was to be completed by April 1, 1989. Not all states were pleased with the delay in implementation. In December, Florida passed its own emergency regulations, requiring use of TEDs in state waters off northeast Florida.

Just days before the delayed final rule was finally to become effective as to offshore areas, Louisiana once again filed suit seeking a temporary restraining order (TRO) and a preliminary injunction (PI) to keep Secretary of Commerce, Robert A. Mosbacher, from enforcing the regulations until the NAS study was complete. On the same day that Louisiana filed suit against him, Secretary Mosbacher announced that the regulation would go into effect as to offshore areas beginning May 1, 1989, but that during a 60 day grace period, only warnings would be issued for violations. Four days later, the district court denied Louisiana's motions for a TRO and a PI. Three weeks later, the parties agreed to continue the suit, but on the merits.

On July 10, ten days after enforcement began after the expiration of the 60 day grace period, the Coast Guard announced the suspension of enforcement of the final rule in response to complaints from shrimpers and pressure from Representative Tauzin (D-LA). On July 20, Secretary Mosbacher announced that he could not legally abandon the final rule's TED requirements and that he was reinstating Coast Guard enforcement. Two days later, shrimpers began blocking ship channels along the Texas Gulf Coast, preventing traffic to and from Houston and Galveston. The shrimpers burned their TEDs and threatened violence if law enforcement agencies were to attempt any further enforcement. On July 24, moments after meeting with Gulf Coast Legislators, Secretary Mosbacher announced that TED regulations would be suspended for 45 days after which shrimpers would be allowed to opt out of TED requirements by limiting their tow time to 90 minutes.

This flip-flop outraged environmentalists. Within hours of Secretary Mosbacher's announcement of the 45 day suspension, the National Wildlife Federation had filed suit making a motion for a TRO to keep the Secretary from enacting the suspension. Four days later, on July 28, the D.C. District Court granted NWF's motion for a TRO, stating that the Secretary had no authority to suspend the regulations. However, the court also gave Secretary Mosbacher until August 7 to either reinstitute the original regulations or to issue interim turtle conservation measures which the court required become effective August 7. On August 1, the federal district court for the Eastern District of Louisiana ruled that Mosbacher had the authority to enforce the TED requirements. Meanwhile, back in Washington, DC, Secretary Mosbacher, barely meeting the court imposed August 7 deadline, announced the issuance of an interim final rule which, as an alternative to using TEDs, would allow limiting trawling time to 105 minutes. This interim final rule was to be in effect from August 8 through September 7.

The next day, NWF filed another suit against Mosbacher, this time objecting to his interim final rule and requesting injunctive relief to keep the interim final rule from going into effect. On August 11, the D.C. District Court denied NWF's motion, stating that it could not make a ruling on the merits until the final rule was published (which was scheduled for September 7). Two days before the September 7 deadline, NMFS announced that the 105 minute trawling limit was insufficient to protect sea turtles and that shrimpers must install TEDs by September 8, 1989. On September 8, the Coast Guard began enforcement. In response, the shrimpers spontaneously boarded 37 boats and blockaded Grande Isle, Louisiana waterway. The blockade ended when President Bush promised the shrimpers that his Chief-of-Staff would look into the matter. On September 13, 1989, NMFS reinstated the original final rule. In October 1989, the National Academy of Sciences report on the endangered sea turtles was released, indicating that their plight was far worse than even the most pessimistic accounts had imagined.

After 1989: The Battle Abates

Though several legislative efforts were made, primarily by politicians from Louisiana, to block the implementation of the final rule as to inshore areas, the final rule did become effective in its entirety, as scheduled, on May 1, 1990. During the 1990 shrimping season, the Coast Guard boarded 684 vessels in the gulf. 481 of these vessels had installed TEDs to their trawling equipment and 203 vessels were in violation. The violations resulted in seizures of equipment, fines and jail sentences. For the entire season, overall total compliance ran 70%. The figures for the end of the season, however, showed increasing compliance, ending up at 85%. Regional compliance varied widely. For example, Corpus Christi had 77% compliance while New Orleans had only 59% compliance. Data for the 1991 season are sketchy. According to the Coast Guard on March 27, 1991: "We're only four weeks into the TED season here in District 8, and we're seeing quite a bit of compliance across the board - about 85% . . . when I say 85%, a couple of boardings one way or the other could change that a couple of points. But right now, it looks like we're getting good compliance." On July 7, 1991, the Coast

Guard boarded 126 shrimp boats near Galveston to check for compliance with TED regulations. Compliance was nearly 95%.

The regulations are still being fine-tuned, and most of the recent efforts in the legislative arena have been in the introduction of bills to provide financial assistance to shrimpers who are required to use TEDs.

Aside from seizures of illegally altered trawling equipment, convictions can result in fines of thousands of dollars. Donnelly claims that many shrimpers did not comply with the TED requirements because they believed Mialjevich "when he said 'don't use the gear, we're gonna get the regulations changed.'" These people have been thrown in jail and fined. He's [Mialjevich] not paying the \$5,000.00 fine, somebody else is."

The Issue Rekindles in 1991

On August 30, 1991, NMFS proposed that regulations requiring use of TEDs from May 1 to August 31 be extended and apply from September 1, 1991 through April 30, 1992, in the Atlantic coast region from North Carolina to Florida (56 Federal Register 36753). Additionally, NMFS announced that it would begin a longer public process with the end goal of permanently requiring year-round use of TEDs in the Atlantic coast region. The final rule, requiring use of TEDs from September 1, 1991 through April 30, 1992, was published September 4, 1991 and was retroactive to September 1, 1991 (56 Federal Register 57313). The regulation was promulgated in response to studies showing a direct correlation between dramatic changes in turtle strandings and the beginning and end of the May 1 through August 31 TED seasons.

Remobilized by this new regulation and the threat of permanent year-round use requirements, Louisiana shrimpers participated in the "Fly-in for Freedom." "Fly-in for Freedom" is a coalition including farmers, ranchers, sheepgrowers, loggers and miners whose goals were to gather in Washington, broaden the groups' lobbying base, win support for legislation more generous to their industries and express their concern that environmental restrictions were crippling their industries. The shrimpers, once again led by Tee John Mialjevich of the Concerned Shrimpers of America (CSA), participated in the Fly-in by visiting members of Louisiana's Congressional delegation, arguing for modifications to the Endangered Species Act that would take their needs into account. Their pleas were well-received by some members of the delegation. Louisiana Senator John Breax responded to CSA's visit: "I think they're right on target. We can't legislate in a vacuum. We have to take into account the cost of human suffering and human dislocation. Everything we do in society and Congress and life in general is a result of compromise. We need a balancing. This act [the ESA] has no account for the social impact and stands out as an exception." Representative Jimmy Hayes responded to CSA's appeals as well: "Shrimpers are losing their jobs and their incomes are

dramatically reduced by the lost catch due to TEDs. They presently are burdened by regulations that don't have substantive support."

As noted above, NMFS announced on August 30, 1991, that based on the 1990 NAS report's surprising data on sea turtle mortality, it would seek permanent year round use of TEDs in all waters. NMFS drafted these expanded regulations, but the Council on Competitiveness prevented NMFS from publishing them.

In early April, 1992, the Environmental Defense Fund (EDF), the Center for Marine Conservation (CMC, formerly CEE) and the National Wildlife Federation (NWF) joined forces and published a report assessing implementation of TED regulations. The report concluded that TED use did not result in the predicted dire economic and safety catastrophes. In addition, EDF, CMC and NWF announced at a press conference that they would be filing suit against NMFS for not publishing the expanded TED regulations. One week later, NMFS announced that the proposed expanded regulations would be released. On April 30, 1992, the proposed expanded regulations were published (57 Federal Register 18446).

Once again, the Council on Competitiveness intervened, this time in an attempt to prevent the final regulations from being published. The Council went so far as to contact most of the state shrimping associations for off-the-record comments on their opinions on the expanded regulations. EDF, CMC and NWF again threatened suit to force release of the final regulations. NMFS was able to temporarily avoid conflict by publishing interim final rules (generally, interim final rules are not judicially challengeable).

The interim regulations, published on September 8, 1992 (57 Federal Register 40861), were due to expire on December 1, 1992. And once again, EDF, CMC and NWF threatened to sue if final regulations were not published by the expiration of the interim final rules. In the meantime, however, President Bush lost his bid for reelection. And, on November 30, 1992, the final expanded TED regulations were published (57 Federal Register 57348).

These final expanded regulations contained nearly every element demanded by the environmental coalition. Included were provisions requiring sea turtle conservation measures throughout the entire year in all waters, both inshore and offshore. Limited tow times, which had been allowed as an alternative to TED use, are scheduled to be phased out by December 1, 1994. Until the phase out is complete, tow times, where still permitted, are reduced to 55 minutes from April 1 to October 31 and 75 minutes the rest of the year. The tow time alternative for small boats in offshore waters was eliminated as of January 1, 1993. In addition, more inshore shrimp trawlers became subject to TED requirements.

The Expansion of TED Requirements Continues

The 1990 NAS report concluded that shrimp trawlers were the leading cause of sea turtle mortality. The report also found that non-shrimp fisheries, including the flounder industry, constituted the second largest cause of sea turtle death. Based on the NAS conclusions, NMFS published interim final rules on September 20, 1993 (58 Federal Register 48797), which required the use of TEDs in summer flounder trawl nets in designated areas of southern Virginia and North Carolina. (NMFS is apparently prepared to continue to expand sea turtle conservation measures to reflect the results of incoming research data, and the measures requiring TEDs in summer flounder fishing trawls are likely to expand to include areas further north along the eastern seaboard.) Knowing the interim rules for the summer flounder industry were about to be published, fishing industry officials quickly organized another "Fly-in for Freedom" which was held in Washington, D.C. during September 18-20, 1993. Most visible during this Fly-in were fishing and shrimping industry representatives from North Carolina.

Compliance with the final expanded TED regulations is running around 94% according to Coast Guard enforcement officers Lt. Commander Mark Johnson in Region 8 and Lt. Sawhill in Washington, D.C. Apparently, some shrimpers put up a bit of resistance in December 1992 when the final regulations became effective, but according to the Coast Guard, the resistance was relatively minor. According to Lt. Sawhill, opposition to TEDs has diminished as shrimpers better learn how to operate their TED-equipped trawls. Lt. Sawhill also speculated that opposition to TEDs may reappear when regulations requiring "by-catch reduction devices" on trawl nets become mandatory within the next 2-3 years.

Analysis and Conclusions

What lessons can be drawn from this partially-successful effort to negotiate rules governing the use of TEDs? Did the attempt to collaboratively negotiate rules help or hinder protection of the endangered sea turtles? Given the benefit of hindsight, could this effort have been made more effective if modified in some way?

There clearly were some problems evident in the process employed to negotiate the TEDs rules. In fact, two key problems likely dictated the unsuccessful outcome: representation and ripeness. While the oversight of omitting the State of North Carolina from the process was probably only marginally consequential, the inclusion of individuals representing only 5% of the shrimp industry's diversity likely doomed the effort. When the negotiated rule was completed, the unrepresented small boat shrimpers launched a very effective campaign against it, stalling implementation for three years and engendering significant ill-will towards environmentalists and the Endangered Species Act.

Would more adequate representation have led to a different outcome? Perhaps, but it is likely true that the issue was simply not ripe for a negotiated resolution at this time. Given the level of political activity supporting the shrimpers' opposition to TEDs, and the ESA, one can conclude that the shrimpers would never have willingly agreed to use

TEDs as a result of these negotiations because they perceived that they could prevail in the political arena. As the issue became elevated to the halls of Congress, their Congressional representatives apparently concurred.

It is conceivable that TEDs regulations would have been forthcoming with less animosity and in a more timely fashion had attention been paid to ensuring complete representation and attaining a broader political support behind the negotiation "experiment." If neither adequate representation nor political support for the negotiations were forthcoming, then perhaps this would have indicated early on that the problem was not ripe for resolution in this manner and the negotiations should not have been pursued.

Some environmental participants feel that they could have potentially done more to alter the shrimpers' willingness to negotiate by garnering more public support behind the issue. The general lack of national public awareness of the issue itself may have deprived the environmental community of power. As Weber commented: "What is utterly remarkable is that in the national media, it has received little media attention, when, since the Tellico dam episode, there has been no situation that is so critical for a species or that would affect [thousands of] business people directly People get more upset about whales when Ridleys are on the brink of extinction. . . . Maybe we didn't market the issue."

In the end, the shrimpers' misperception of their power in the situation was to their detriment. Weber, Cotter and Donnelly felt that, ultimately, industry was hurt by their opposition to the agreement-based regulations. Cotter noted that the negotiations took three years to phase-in the extension of the TED requirements out to 200 miles. The modifications which resulted from Mialjevich's campaigning did exempt certain inshore areas and instead allowed tow time limits for small boats, but they also immediately extended the regulations out to the 200 mile limit. This modification had an immediate and severe impact on shrimpers with larger vessels. Donnelly noted that when the NAS study finally was released (which, as noted above was demanded by gulf legislators who claimed that sea turtles were not endangered), sea turtle mortality figures were far worse than anyone had imagined. Weber noted that opposition did result in delays, but ultimately, the delays produced information which vindicated the environmentalists' position and that, therefore, stricter regulations ensued.

It is conceivable that, had the shrimpers been willing to bargain in good faith, that this case would be a success story in negotiated rule-making. While the environmentalists felt certain that they would prevail in court, they perceived an advantage (or less of a disadvantage) in negotiating to promote ownership of the solution and hence advance the use of TEDs and to limit potential hostility towards the ESA.

When Cotter was asked to mediate, Jim Brennan, NOAA General Counsel, said to him: "Well, Larry, frankly it will be a miracle if you get anything." When Cotter was asked how the turtle fared through the negotiations and would CEE had fared better by going right to court, he answered: "Had the environmental community gone to court, I

think they would have prevailed. I think that the U.S. shrimp industry would have been shut down in the Gulf of Mexico. I think that would have resulted in a number of things. First of all, there would be a tremendous backlash against the environmental communities down there. Secondly, I do not think that the data generation would have occurred. Thirdly, I suspect that there would have been much stronger efforts to amend the Endangered Species Act. In many respects, we would have had the spotted owl five years ago."

The environmental participants in this drama are equally mixed in their attitudes towards the appropriateness of the negotiations in resolving this issue. When Weber was asked whether the turtle would have fared better if they had sued, he responded that back in 1986, they felt confident that they would win a lawsuit and subsequent appeals and, eventually, get a Supreme Court ruling in their favor. However, what Weber feared was that Congress would then step in and alter the ESA. He comments that Congress did alter the ESA, but that in the hearings, Congress made note of the environmentalists' constant efforts at cooperation. Weber was told by hearing members that they would refuse to reward the environmentalists for this noble effort by "bushwacking" them.

Antipathy to TED requirements has abated since the turbulent conflicts of 1989-1990. However, opposition to TEDs has not disappeared. Deborah Crouse of CMC has observed that nearly all of the present opposition comes from either inshore shrimp trawlers and summer flounder trawlers (which have only recently become subject to TED requirements) or from shrimpers from states with legislators opposed to TED regulations (e.g., Tauzin of Louisiana and Laughlin and Fields of Texas). In other states, support for TEDS has grown tremendously. When the Council on Competitiveness contacted the South Carolina Shrimpers Association, they were told that shrimpers liked TEDs because of the device's ability to exclude other unwanted objects and debris such as jellyfish, and that shrimpers there used TEDs even when they were not required to do so.

When asked, Dr. Crouse commented that she believed the negotiations over TED regulations had a positive impact on the relative ease with which TED regulations have been permitted to expand to reflect the realities exposed through the results of continuing research. Dr. Crouse believes that some participants in the negotiation, particularly NMFS and state agencies, realized, through negotiation, that TEDs could be lived with.

The data wars over sea turtle conservation do continue. But the outcomes of the primary battles to date have been in NMFS' and the environmentalists' favor. Perhaps because of these past data successes, NMFS and the environmental community appear to be more willing to listen to some of the trawlers' concerns. For example, because NMFS really had not adequately tested TEDs in inshore waters, TEDs will not be required until the end of 1994 in inshore waters. This extensions was given in order to give time for adequate research and to provide for possible revisions in TED designs. In addition, TEDs are being redesigned for the flounder industry.

Despite its rocky course, there were clearly some beneficial outcomes of this effort to negotiate rules governing the use of TEDs. One obvious result was that the final regulations now in place regarding TEDs mirror those that were developed during the negotiations. Other positive outcomes include the increased understanding and appreciation for the plight of the sea turtles that came about because of the educational and research aspects of the process. Another result was that signatories to the negotiated agreement clearly felt bound by it and either advanced it or purposely did not criticize it during the ensuing years of political battles. (This latter outcome can be a two-edged sword, however. While it is true that this "ownership" factor fosters implementation of negotiated agreements, we should nonetheless not lose sight of the repercussions to some individual shrimpers and industry representatives because of their participation in and then agreement with the negotiated rule.)

CASE STUDY #6

SAN BRUNO MOUNTAIN HABITAT CONSERVATION PLAN¹

Background

San Bruno Mountain is the last, large open space left in the northern San Francisco Peninsula. Not surprisingly, the mountain had been the source of a bitter battle between local environmentalists and developers well before negotiations on the San Bruno Mountain Habitat Conservation Plan began. The mountain also is home to the San Bruno elfin butterfly (Callophrys mossi bayensis) and mission blue butterfly (Plebejus icarioides missionensis), both of which are listed as federally endangered, as well as the Callippe silverspot butterfly (Spayeria callippe callippe), which was a candidate for listing at the time of this dispute.

An earlier skirmish resulted in a 1980 settlement between San Mateo County and Visitacion Associates, one of the developers, in which the county agreed to zone one-third of the mountain for development and leave the rest as parkland.² All was quiet until the U.S. Fish and Wildlife Service (USFWS) proposed to list and designate critical habitat for the Callippe silverspot butterfly. According to USFWS, "In the San Bruno Mountains, the species is uncommon, and proposed developments there would probably eliminate the butterfly." Visitacion Associates, which was extremely well-connected in Republican circles and had access to then President Ronald Reagan,³ took up arms, threatening to block the silverspot listing and have the mission blue and elfin butterflies delisted. Environmentalists, initially represented by the Committee to Save San Bruno, were equally determined to protect the butterflies and their habitat. It was in this highly charged political atmosphere that negotiations took place.

The Parties

1. The Committee to Save San Bruno was well-established before the HCP negotiation began. The loosely organized coalition consisted of the Committee for Green Foothills (CGF), the Loma Prieta chapter of the Sierra Club, and the local chapter of the National Audubon Society. Their objective was to protect as much of the butterflies' habitat, and the mountain in general, as possible.
2. Visitacion Associates, a developer, thought it had settled the matter in 1980. When it became clear that endangered butterflies might block their bulldozers, their objective was

¹ This case study was developed by Harlin Savage and Beth Delson.

² The San Bruno Mountain Habitat Conservation Plan (Draft 1990), prepared by Mike O'Connell, World Wildlife Fund, Washington, D.C. (This narrative relies heavily on material included in the draft report.)

³ Telephone interview with Tom Adams, attorney for Committee to Save San Bruno, San Francisco, CA., April 1991.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

to delist the butterflies and proceed with development. Visitacion Associates apparently spoke for the majority of landowners.

3. The U.S. Fish and Wildlife Service's main concerns were protecting the endangered butterflies and avoiding lawsuits.

4. The Cities of Brisbane, Daly City, South San Francisco and the San Mateo County Board. At the time of the dispute, the Brisbane City Council could be characterized as pro-environment. This later changed, with an election of a new city council, when amendments were proposed by the city and the developers. Daly City was pro-development. South San Francisco and the San Mateo County Board probably fell somewhere in between on the political spectrum.

5. The California Department of Fish and Game and the California Department of Forestry.

The Process

County Supervisor Bacciocco initially was responsible for getting the parties to agree to negotiate. Bacciocco ran the meetings and served as mediator. Lenny Roberts, a member of the Committee for Green Foothills, remembers Bacciocco as being fair and said, "(He) tried to keep the playing field even." The first step was to form a steering committee, which the parties agreed would operate by consensus. The next step was to hire an outside consultant, Thomas Reid Associates, to do the biological studies on which the plan would be based. While members of the Committee to Save San Bruno, including Roberts, attended meetings, the group was represented formally by two environmental attorneys, Tom Adams and Ann Broadwell. Adams and Broadwell also represented the City of Brisbane. Most of the city council members also were members of the Committee to Save San Bruno so conflicts were not apparent at the outset. The City of Brisbane paid the attorney's fees with money budgeted for planning activities. Without that infusion of funds, the environmental groups probably would not have had professional representation.

To ensure the quality of Reid's biological studies, the steering committee decided to have three outside experts review his research. Whether the county approved the reviewers, who were all well known biologists at the University of California, or the steering committee approved them is unclear. Reviewers generally lauded Reid's studies, given time constraints, but they cautioned that estimates of butterfly populations and their locations were inexact and that the parties should plan accordingly. The local Sierra Club was somewhat skeptical and sent the report to Dr. Jay Hafernik, a biologist at San Francisco State University, for a second opinion.⁴ Hafernik was, and still is, outspoken in his criticism of Reid's study and the HCP agreement. According to Hafernik, the data provided a crude estimate of total butterfly populations but could not be used to identify,

⁴ Telephone interview with Dr. Jay Hafernik, professor of biology, San Francisco State University, San Francisco, CA. April 1991.

with any degree of certainty, which parts of the mountain they occupied. "Somehow," Hafernik says, "what should have been perceived as rough estimates took on a life of their own." Other members of the steering committee apparently were less concerned about the quality of the research and its interpretation. The Committee for Green Foothills did not send the report for additional review.⁵ Despite some internal dissent, the committee accepted the studies' results as adequate to serve their intended purpose.⁶

Having passed muster, Reid's report was used as the scientific basis for negotiations. In November 1982, the steering committee approved the San Bruno Habitat Conservation Plan. The local governments then applied to the USFWS for a Section 10(a) permit. One notable bureaucratic hurdle remained. The USFWS had prepared a draft recovery plan for the mission blue butterfly, which would have designated the South Slope and Northeast Ridge as essential habitat, before negotiations got underway. The HCP allowed development in those areas, albeit scaled-down from the developer's initial proposal. The recovery plan was subsequently revised to eliminate significant discrepancies.⁷ The agency issued a non-jeopardy biological opinion and granted the 30-year permit in 1983.

The Committee to Save San Bruno did not sign the agreement though several member groups voted privately to endorse it. The committee's unified front masked disagreement within its ranks; those who ultimately supported the plan did so warily.⁸ According to Adams, the coalition held together until compromise became inevitable. The group split and a splinter group, Bay Area Mountain Watch, formed opposed to the agreement. Support from other local groups, the Loma Prieta chapter of the Sierra Club and the Committee for Green Foothill, was lukewarm at best. The Sierra Club's board voted neither to oppose nor support the plan⁹ and Committee for Green Foothills narrowly approved it by a vote of 8-7.¹⁰ More than half a dozen national environmental groups protested the USFWS' award of the Section 10 (a) permit.¹¹

The Agreement

Assuming Reid's figures as the base, the HCP allows development of 10 percent of the butterflies' habitat; the rest becomes state, county or city-owned parkland. Not all of that 90 percent is good butterfly habitat, however. Some areas are infested with gorse (Ulex europaeus) and others lack the particular lupine (Lupinus albifrons) and violet

⁵ Telephone interview with Lenny Roberts, member of The Committee for Green Foothills, San Francisco, CA. April 1991.

⁶ Telephone interview with Adams and Roberts.

⁷ O'Connell, draft report.

⁸ Telephone interview with Roberts, Loraine Burtzloff, Bay Area Mountain Watch, San Francisco, CA, and Ellie Larsen, Sierra Club Loma Prieta Chapter, Palo Alto, CA. April 1991

⁹ O'Connell, draft report. Telephone interview with Roberts. Adams thinks they supported the plan.

¹⁰ O'Connell, draft report.

¹¹ Including Environmental Defense Fund, Natural Resources Defense Council, Xerces Society, Friends of the Earth, International Union for the Conservation of Nature and Natural Resources, Center for Law in the Public Interest, Center for Environmental Education, among others.

species on which the butterflies depend for food. The agreement provides for the "enhancement" of poor quality habitat, but success has been very limited.¹² The HCP restricts grading and construction to minimize disturbance of butterfly populations and provides stiff penalties for violations. In addition, the developer must post a \$25,000 performance bond before work can begin.

The agreement calls for monitoring and additional research to determine how the butterflies fare under the development regime. The "plan operator," in this case Thomas Reid Associates, is required to send annual monitoring reports to USFWS. The plan does not set specific goals for enhancement activities nor does it specify the kind of research to be undertaken. It does, however, stipulate that population studies should be done. Permanent funding for HCP mandated activities is provided through a trust fund fed by fees paid by landowners. The developer pays consultant's fees for managing the HCP. Local jurisdictions also contribute funding and services.

Finally, the HCP sets up a three-tiered amendment process to allow some flexibility in carrying out the plan. Minor boundary changes of less than 30 feet must be approved by the local city or county. Equivalent exchange amendments, which involve trading preserved habitat lands for lands of equal biological value, must be approved by the local city or county and the USFWS. Major amendments, which may be proposed every three years, require a public hearing, biological studies to prove the butterflies will not be adversely affected by the proposed change and must win approval from the local government, the County of San Mateo and the USFWS.¹³

Implementation

Implementation has not been a quiet affair. There have been amendments and lawsuits that have challenged the ecological soundness of the agreement. At the time, the parties thought the process was cumbersome enough to be a disincentive for people who might want to alter the HCP. Their sanguine outlook was unfounded. Adams said, "wars broke out continually for the next four years." As an example, he cites an episode in which the developer proposed a major boundary change only two months after the agreement was signed. The Committee to Save San Bruno felt "betrayed." The developer was angry because the committee was "unreasonable."¹⁴ Since 1983, the HCP has been modified several times, with amendments having significant impact on butterfly habitat though mitigation measures were added as a condition of approval. Roberts recalled that, "We didn't really think there would be so many amendments. The agreement turned out to be more ephemeral than we had expected." Despite efforts to anticipate problems, Roberts says, "it's nearly impossible to do."¹⁵

¹² Telephone interview with Hafernik. O'Connell, draft report. Telephone interview with David Schooley, Bay Area Land Watch. California Native Plant Society letter to USFWS.

¹³ O'Connell, draft report.

¹⁴ Telephone interview with Adams.

¹⁵ Roberts interview.

Southwest Diversified bought Visitacion Associate's development area and wanted to change the Northeast Ridge development. Bay Area Land Watch's founder David Schooley explains that with the election of a new pro-development Brisbane City Council, Southwest Diversified and the City of Brisbane worked out a deal to amend the HCP with an equivalent exchange amendment. The city wanted to build a "different type of units" to attract residents who can afford larger homes. The amendment was approved in 1991 reducing the number of units from 1,250 to 560 (or 578 according to Brisbane City manager, Robin Leiter) single family units. Harris attributed this to "politics in Brisbane." Southwest Diversified broke ground on this project in the fall of 1992.¹⁶

David Schooley, originally a member of the Committee to Save San Bruno Mountain who later formed Bay Area Mountain Watch and Bay Area Land Watch, explains that the areas provided for ecological restoration of lupine and gorse control are of a different enough climate to cause failure. Schooley explains: "Gorse will not advance over the dry, south-facing, rocky, thin soil of the Northeast Ridge or South Slopes, major areas of mission blue habitat. Gorse advances in moist, foggy, tree shaded, north facing areas with deep soil and dies out along the edges in drier years." Schooley feels that for this reason restoration efforts are failing while "some of the best endangered species habitat is being forever destroyed by development." Harris mentioned another unexpected set back to restoration efforts. The re-vegetation planner hired by a developer unexpectedly died. A new expert, Dave Kaplow, was hired and Thomas Reid Associates is waiting to determine his success. Dr. Hafernik concurs with Schooley about the failure of the restoration and exotics control efforts: He questions, "[i]s it likely that efforts, which have so far failed to control invasive species, will suddenly succeed, especially in a time of budgetary restraint?"

Effects on the Endangered Species

From 1983 to 1993, approximately 230 acres of San Bruno Mountain habitat have been disturbed by development authorized under the Habitat Conservation Plan.¹⁷ For financial reasons, however, ground has not been broken on many areas slated for development. Schooley says that the financial difficulties of the developers have caused delays and, in turn, adversely impacted the restoration efforts that are the responsibility of the developers.

On the South Slope there was unexpected serious soil erosion, according the Gankin who said that "geotechnical studies were not done." Victoria Harris said the concern was with W.W. Dean's Terrabay development. There was a landslide and, due to financial difficulties, the developers stood "two years doing nothing." The Resolution Trust Corporation paid interim mitigation fees to "restore the graded slope." The planners are now awaiting a bid from a new owner to take over this development. Harris sees this as an "unforeseen" hurdle since there is no "continuity" to the project. She is

¹⁶ Letter from Dr. Hafernik to Members of Brisbane City Council. Nov., 30, 1990.

¹⁷ Thomas Reid Associates, San Bruno Mountain Habitat Conservation Plan Activities Report -- 1992.

optimistic, however, that there will be a bid since phase I of the project has received the required permits.

Parties Attitudes Toward The Agreement

Environmentalists, in general, are not satisfied with the HCP, though representatives of groups that endorsed it begrudgingly agree the plan was the best they could get given the hostile political climate that prevailed in the early 1980s. Roberts and Ellie Larsen, a member of the Loma Prieta chapter of the Sierra Club, said they were extremely concerned about protecting the Endangered Species Act, which was under attack in Congress at the time. They also perceived the developer's threat to sabotage the Callippe silverspot butterfly listing and delist the endangered butterflies as serious. Adams concurs: "Reagan and Watt had taken over. Trade associations in Washington, D.C. were demanding repeal of the Endangered Species Act. The Tellico Dam case was fresh in the public's mind. We thought that if we created a conflict between a housing development in San Francisco and an insect, albeit an attractive one, we might threaten the Act itself. The case had the potential to generate a lot of publicity. So we decided to negotiate a principled compromise."

Roberts of the Committee for Green Foothills mentioned that "without Adams (legal counsel), we would have been at a tremendous disadvantage. He helped put us on equal footing with the other parties." Adams agreed that environmental groups often lack the time, money and technical expertise necessary to participate effectively in negotiations that can last months: "Environmental groups rely on volunteers. They may not always be able to spend the time it takes to deal with complex issues. Developers, on the other hand, have money to hire dozens of experts to scrutinize every nuance of every draft of every proposal. In other words, it's not a fair fight." He fears that ill-prepared and unwitting environmental groups may lend legitimacy to a process that ultimately does not serve their interests.

Though she acknowledges the impracticality of purchasing and preserving the entire mountain, Roberts is cynical about negotiations: "Negotiation can only result in compromise, and we've had many compromises already. If we were to do it again, the stakes would have to be extremely high, and we would have to be assured an equal voice in the outcome. There are too many unknowns, especially when you're talking about endangered species. If anything, we should give the species more habitat instead of allowing development to eat away at what's left." Adams is more optimistic and believes that Section 10(a) permits create a needed outlet within the confines of the Endangered Species Act. "Overall," he says, "the net effect of HCPs will be positive."

Loraine Burtzloff, a member of the Bay Area Mountain Watch, is bitter in the aftermath of the HCP agreement. She describes it as a "sham." Bay Area Mountain Watch now has over 2,000 local residents committed to preserving the entire mountain. According to Burtzloff, "A great deal of the mountain has been destroyed. It's a real tragedy. When you go look at the areas set aside for the butterfly, hardly anything is

growing." She also feels that "there is no room for meaningful citizen input." Burtzloff said that there needs to be "more protection, different procedures, and neutral well-respected scientists."

Since the agreement was signed, Bay Area Mountain Watch has employed tactics to halt or delay development. They succeeded in getting a referendum on the ballot that would have repealed the zoning ordinance permitting construction. This prompted a lawsuit from the developer. The developer won the lawsuit based on a ruling that HCPs are an exception to the rules mandating other zoning laws. Bay Area Mountain Watch also sued the City of Brisbane for violating the California Environmental Quality Act, but they chose to withdraw the suit with the advice of their lead attorney, Sharon Duggan.¹⁸

Victoria Harris, with Thomas Reid Associates, and Roman Gankin, Principal Planner for San Mateo County, both believe that the HCP benefits the butterflies because the HCP funds exotics control, performed by the county and Reid Associates. Gankin maintains that "if there were no HCP, nothing could be done on San Bruno Mountain to stem the tide of the exotics. The fund trustees are very careful to exercise prudent judgment in the expenditure of any of the funds accumulated for the HCP. In that regard, they, like the County, are anxious to determine a 'best approach mechanism' for the management of invasive exotics."

Harris also feels that the HCP guidelines are rigid and "too strict" and that, for example, it "wasted time" to make a 20-30 foot boundary change. She said it took the FWS a "long-time to respond" and that "flexibility" was needed. She also said that the HCP was determined by "politics and economics," especially with the change in the Brisbane City Council. Overall, however, Harris states that "my feeling is the HCP allows for the assurance that habitat is preserved and will result in the long-term survival of the butterflies."

The California Native Plant Society (CNPS) has severely criticized the gorse control efforts as inadequate. In a May 1993 letter to the USFWS, CNPS wrote "It is our perception that the Habitat Conservation Plan (HCP or Plan) is not only failing to achieve its stated goals but that we are losing ground to the inexorable advance of weedy species.... Our discontent is at the fundamental management levels and cannot be assuaged by infusion of more money. We support the goals of the HCP and will do everything in our power to help it achieve these goals....we think it imperative that an evaluation be accomplished....An analysis of spending is needed." Harris feels that CNPS "does not understand..(and) have high expectations for gorse control....It cost \$20,000 to remove 40 trees." Gankin explains that the county, which is using the HCP fund to control gorse, has recently contacted experts at the University of California at Davis for a "peer review." The county, according to Gankin, aims to maintain the HCP fund with half a million dollar cushion to handle "set backs" caused by storms, fires, etc.

¹⁸ Burtzloff, Interview, 1993.

Robin Leiter, Brisbane City manager, feels that a barrier to the HCP process is that it has a "very involved amendments process (with) no clear standards." She agrees that "toughness is necessary to ensure survival, (but) that government becomes difficult."

CASE STUDY #7

THE COACHELLA VALLEY HABITAT CONSERVATION PLAN¹

Background

Coachella Valley encompasses more than 300 square miles of desert in one of the fastest growing regions of southern California. Though popularly known as home of celebrities, the valley also provides critical habitat for the Coachella Valley fringe-toed lizard, (*Uma inornata*), a federally endangered species. The dispute began in 1980 when the lizard was added to the federal endangered species list. At that time, the U.S. Fish and Wildlife Service (USFWS) was considering the designation of 170 square miles of desert as critical habitat for the lizard. USFWS scaled down the critical habitat designation to 20 miles after Congress amended the Endangered Species Act in 1982. While a seemingly modest proposal, it was restrictive enough to rouse considerable local opposition.

Environmental groups in the valley, namely the Coachella Ecological Reserve Foundation, led by Dr. Alan Muth, and the California Nature Conservancy, had been working to preserve a portion of the desert ecosystem prior to the lizard's listing. However, they faced tremendous local political opposition. It had been a lonely and decidedly uphill battle until 1982: the year Congress amended the Endangered Species Act to allow incidental taking permits and the Sunrise Development Company decided to build the Palm Valley Country Club on more than 400 acres of lizard habitat.

The Parties

1. Coachella Valley Ecological Reserve Foundation
2. The California Nature Conservancy
3. Sunrise Development Company
4. Coachella Valley Water District
5. U.S. Fish and Wildlife Service
6. Bureau of Land Management
7. California Department of Fish and Game
8. Local governments, including the cities of Palm Desert, Palm Springs, and Rancho Mirage, and Riverside County.
9. Riverside County Planning Department
10. Agua Calient Indian Tribe

¹ This case study was developed by Harlin Savage and Beth Delson.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

The Process²

The first step was to involve as many parties with a stake in the outcome as possible. To that end, Muth and Paul Seltzer, the attorney representing the Sunrise Development Corporation, actively recruited participants. After the group was assembled, the parties designated a smaller steering committee nicknamed "the lizard club" to hammer out the details of a Habitat Conservation Plan. The steering committee operated by consensus, with Seltzer acting as mediator by default.

As often happens, the steering committee hired an outside consultant, Thomas Reid Associates, the same consultant that worked on the San Bruno HCP, to do the biological studies to determine the size of the lizard population and its habitat requirements. Despite expenditure of \$100,000, the study failed to answer critical questions about "population dynamics, ecological relationships and limiting factors." Apparently, the committee was working under a deadline that precluded field work. Reid did, however, survey lizard experts to find out what measures they thought were necessary to ensure the long-term survival of the species. While the consultant may have provided the best information possible given the financial and time constraints, the studies were later criticized as inadequate for planning a long-term HCP.

Two specific points about the process are worth noting. First, the parties had to agree on a starting point for negotiations. As Muth remembers, he and the biologists for the developer spent a fair amount of time arguing about which parts of the valley were occupied lizard habitat. Finally, everyone agreed to consider all undeveloped land that was part of the lizard's historical range. Second, the USFWS, the Coachella Valley Ecological Reserve Foundation and the other parties agreed to allow incidental takings while the agreement was being negotiated provided developers paid a fee and did not develop in areas zoned for interim protection. Critical habitat designation was used to identify areas that were likely to form the main preserves and needed interim protection. Muth and others thought this was necessary to bring the developers to the bargaining table.³

The Agreement

An HCP agreement was reached in 1985. It set aside roughly 17,000 acres in three permanent reserves. These protected lands contain 7,838 acres of habitat potentially occupiable by lizards, roughly ten percent of what then existed. Additional habitat was protected through informal agreements with the Bureau of Land Management and Southern California Edison Power Company to manage adjacent lands so as not to harm the lizard. The HCP also suggested but does not require monitoring and evaluation

² O'Connell, Mike. Coachella Valley Habitat Conservation Plan, draft report. World Wildlife Fund, Washington, D.C., 1991.

³ Telephone interview with Dr. Alan Muth, director of the University of California's desert canyon research center and former chair of the Coachella Valley Ecological Reserve Foundation, CA. April 1991. And O'Connell, draft report.

of lizard populations. The USFWS is responsible for assessing the effectiveness of the program based on how much money is collected for land acquisition and how well the preserves protect the lizard. The USFWS may amend the plan or revoke permits if necessary.

Funds for land acquisition and maintenance and implementation of the HCP come from several sources, both public and private. The total cost of land acquisition in 1985 dollars was \$20 million, most of which was provided by the California Nature Conservancy (\$2 million), the federal government (\$10 million) and the State of California (\$1 million). Long-term funding comes mainly from fees paid by developers. The steering committee agreed to impose a fee of \$600 per acre of development. After \$7 million has been collected, the per acre development fee drops to \$100. In the mid-1980s, land in Coachella Valley was selling for ten times that amount or somewhere between \$5,000 and \$6,000 per acre. Real estate is even more expensive now. Muth pushed for acre for acre mitigation but did not get it. What the fee amounts to is about two-tenths of an acre preserved for every acre developed. Today, one of the main concerns is that the development fee is not inflationary.

The California Nature Conservancy coordinates land acquisition and most of the monitoring and lizard research. The USFWS Regional Office in Sacramento is supposed to keep tabs on management and evaluate research results. The HCP does not establish a technical advisory or oversight research committee that would provide outside review of HCP implementation as was done in the San Bruno case.

The HCP also established a four-tiered process for changing the plan. Amendments not changing areas of incidental take require approval from the USFWS and the California Department of Fish and Game. Amendments not changing areas of incidental take more than 10 percent must be approved by the USFWS and the local jurisdiction. Amendments affecting the overall HCP program must gain the approval of all the parties that signed the agreement. And amendments involving flood control facilities must be approved by the USFWS.

Implementation

As for implementation, enforcement has not been a problem. Also, restoration and enhancement of lizard habitat seems to have been a success. However, the lizard is still on shaky ground. Monitoring shows that biological assumptions made about the lizards were incorrect. For example, researchers have discovered that lizard populations fluctuate dramatically. No one has figured out why this happens or how these abrupt population swings affect the lizard's habitat needs.

Funding has been a problem. The pot of money collected from development fees has not filled as quickly as expected. Again, no one seems to know why this has happened though some people think that local governments may be letting developers off

the hook.⁴ Local jurisdictions are responsible for imposing fees and are allowed some discretion. Whether a fee is collected and how it is collected may depend on where the land is located and the type of use proposed.⁵

Another potential threat to the HCP and the lizard has come from the politically powerful Coachella Valley Water District that proposed a flood control plan that would inundate a significant amount of protected lizard habitat.⁶ Muth said the parties talked about the flood control issue during the negotiations but kept pushing it aside to be dealt with later. Today, Muth believes that the flood control issue will most likely not threaten the lizard in the near term since any plans would need to comply with the HCP.⁷

Effect On The Endangered Species

Two of the lizard populations appear to be stable, according to Muth's field research. One population, however, has declined precipitously -- more than 90 percent in five years. Whether the abrupt decline is due to California's drought, natural population cycles or other reasons is unknown.⁸

Parties Attitudes Toward The Agreement

Dr. Muth believes that the fee mechanism should be changed and that more habitat protection might be necessary, but he believes that "ten years ago...we did the best we could with the information available (and that) opening up the process for amendments is like opening a can of worms for both strengthening and weakening amendments."⁹ Given the intense development pressures and local political opposition facing environmentalists, preserving even a small slice of the desert ecosystem was a victory, though whether it was enough to protect the lizard is unclear. According to Muth "the process worked here. We did the best we could using the best information at the time. Now we have to wait and see what happens."

Indeed, environmentalists may have been more concerned about protecting part of the desert ecosystem than ensuring the long-term survival of the lizard. The plan has been criticized for not protecting enough lizard habitat. Muth does not think the criticism can be justified. "If you examine what was left (undeveloped) in the valley that could potentially serve as good lizard habitat," Muth argues, "we got almost everything protected in the HCP. Admittedly, that was small percentage of the lizard's historical range, but we had to have lands that could be maintained ecologically as good habitat over the long haul." Dr. Muth said that the Coachella Valley Ecological Reserve

⁴ Telephone interview with Dr. Alan Muth, director of the University of California's desert canyon research center and former chair of the Coachella Valley Ecological Reserve Foundation, CA. April 1991. And O'Connell, draft report.

⁵ Telephone interview with Dr. Muth.

⁶ Telephone interview with Dr. Muth.

⁷ Telephone interview with Dr. Alan Muth., June 1993.

⁸ Telephone interview with Dr. Muth.

⁹ Telephone interview with Dr. Muth, June, 1993

Foundation has since "disincorporated" since they felt as though they had "accomplished their goals."¹⁰ If an amendment were proposed, however, Dr. Muth said he would push for enlargement of the western boundary to include more sand source in Indio Hills, in Mission Creek drainage and in Willowhole preserve.

Cameron Burrows of The Nature Conservancy believes that "the HCP is definitely the right way to go in terms of solving endangered species conflicts between development and protection." Burrows does see some problems, however, with the Coachella Valley HCP. First, he believes the funding structure is inadequate in that it is not tied to inflation. Second, Burrows believes that it is necessary to conduct research to collect the best available data and to update the HCP accordingly. He believes that the USFWS is not paying enough "follow-up attention to ensure that it works." Burrows believes that the lack of follow-up is due to a failure to account for an appropriate follow-up mechanism in the original design of the HCP. The management committee, Burrows feels, is staffed with professionals with "considerable other job duties" and hence has not been able to conduct sufficient follow-up.

Art Davenport, biologist with the USFWS, also thinks the fee collection mechanism needs updating. Davenport said part of the problem is that each municipality has a different mechanism for collecting the fees. He feels that since "turnover is so high in planning agencies, it is dangerous" since many planners that were not involved in the initial HCP process are now responsible for implementation. He says that counties have also not monitored the HCP closely. The management team, Davenport reports, is not an oversight committee and it can only respond to projects, not take a proactive planning role. Davenport would also like to see a multi-species conservation plan developed. He feels that counties need motivation to do this and he regrets that further endangered species listing seems to be the primary motivation.

Lessons

Whether this is a success story or an abysmal failure depends on one's perceptions. One might say that 5-10 percent of lizard habitat was spared from destruction. Conversely, one could argue that developers were given license to develop most of the valley. Dr. Timothy Beatley, a professor at the University of Virginia, has faulted the plan and the process itself. "There was never a fundamental reassessment of land use planning in the valley," Beatley comments. He also does not think the agreement upholds the spirit of the law, or for that matter, the letter of the law, which states Sec. 10 (2) (B) (iv) that the "taking will not appreciably reduce the likelihood of the survival and *recovery* of the species in the wild (emphasis added)"

Dr. Muth said that the mitigation fee might be "reason enough" for proposing an amendment. He stated that "all knew it was a mistake" to have a long-term fee collection device with no inflation but that it was partially done to "diffuse the situation with the developer." He believes, however, that "no future HCP plan should ever do that again."

¹⁰ Telephone interview with Dr. Alan Muth., June 1993.

Art Davenport also believes that the fee mechanism should be attached to inflation. Davenport is in the process of completing a comprehensive report detailing progress and areas of concern in the Coachella HCP. This report is not yet available while Davenport is awaiting comments from USFWS "higher-ups." Cameron Barrows, of the Nature Conservancy, is waiting the release of the document given that TNC has requested such an evaluation for several years now.

Dr. Muth summarizes his view of the Coachella Valley HCP by saying that "no plan is perfect. The HCP process is an evolving thing. Given that, it's worked well. Overall, we need to look at multi-species planning and take a proactive view. I hope that is the direction the re-authorization of the Endangered Species Act will take."

CASE STUDY #8

THE GRAYROCKS DAM CONFLICT¹

Introduction

The Grayrocks Dam Conflict had two intertwined issues. First, it was an interstate water rights dispute between Nebraska and Wyoming over North Platte River water to be consumed by the proposed facility. The second conflict was between conservationists and the utilities over potential harm to the federally-listed endangered Whooping Crane downstream from the proposed dam. After several years of political and legal battles, the parties were able to successfully negotiate an agreement addressing the concerns of each. Fifteen years later there is still strong support for the settlement and the negotiations that created it.

Background

The Missouri Basin Power Project (MBPP) was a consortium of six utilities involved in constructing a \$1.6 billion coal-fired power plant on the Laramie River, a tributary of the North Platte River, near Wheatland, Wyoming. MBPP formed in 1970 in response to heavy industrial power requirements forecasted for the utilities' service area: eastern Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Iowa and Minnesota (figure 1). The six utilities were each experiencing increasing energy demands and viewed a combined effort as the expedient approach to meet this demand. Siting difficulties and cost considerations made individual efforts less efficient. The electricity generated by this facility was projected to serve two million customers in the eight state area.

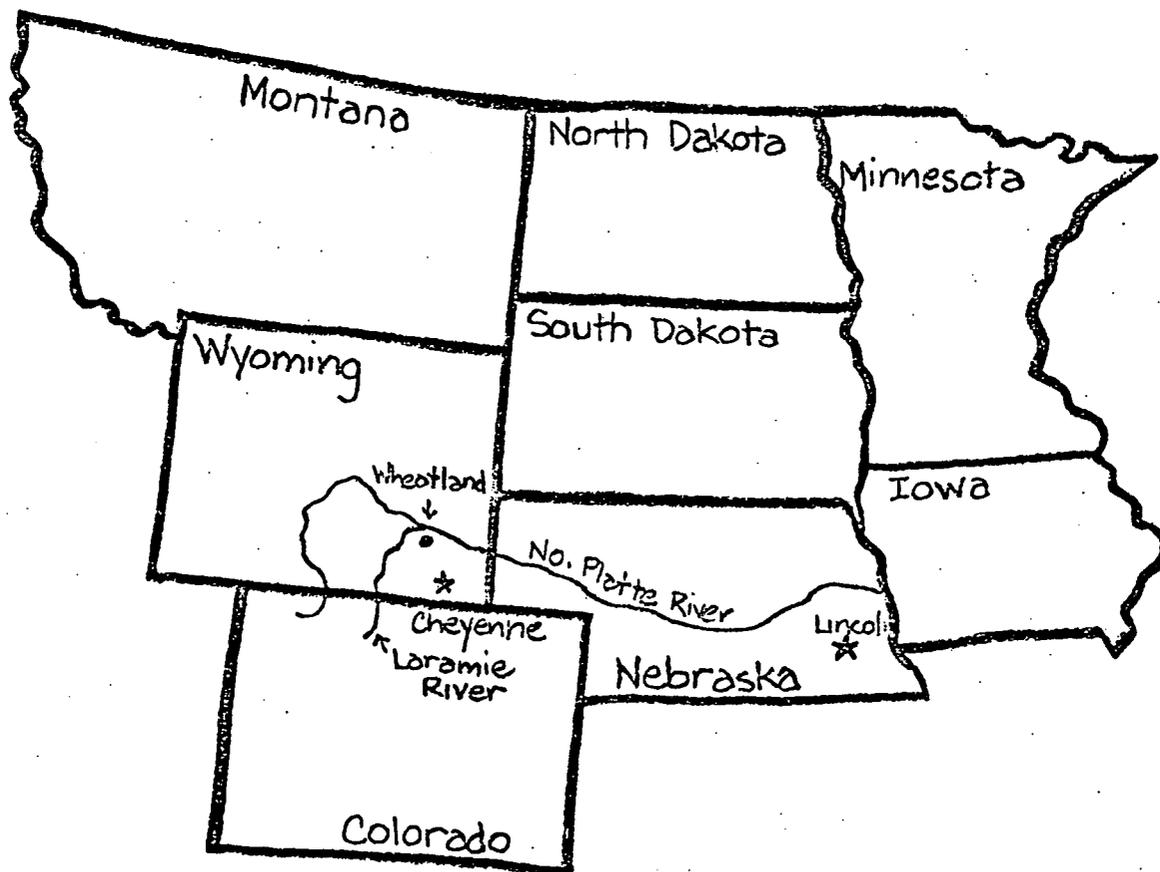
The facility had two main components: a coal-fired plant (then 50% completed) and an adjacent reservoir and dam supplying cooling water for this plant. The Grayrocks Dam, behind which the new reservoir will form, became embroiled in controversy involving several parties with varying interests:

- The state of Wyoming (Wyoming) favored the project because of its economic benefits: jobs, economic growth, electricity for rural Wyoming, and irrigation water.
- The state of Nebraska (Nebraska) opposed the project. It felt Wyoming would consume more than its share of North Platte River water with this project and that Nebraska's water needs would suffer as a result.

¹ This case study was developed by Julia M. Wondolleck.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

Figure 1: Missouri Basin Power Project Combined Service Area



- Conservation groups (National Audubon Society, National Wildlife Federation, Nebraska Wildlife Federation, Powder River Basin Resource Council and Laramie River Conservation Council) were concerned that the plant's water use would endanger wildlife along the North Platte River, especially the endangered Whooping Crane.
- The Rural Electrification Association of Nebraska (REAN) favors the facility since it stands to benefit from the power generated.
- The six MBPP utilities obviously favor continued plant construction.

The conflict among these parties and the process leading to its gradual resolution, will be described in this case study.

Federal Involvement

In addition to the requirements of the National Environmental Policy Act (NEPA), the federal government was involved in the Grayrocks Dam conflict through three agencies.

The U.S. Fish & Wildlife Service (USFWS) The U.S. Fish and Wildlife Service, within the Department of the Interior, is charged with, among other things, administering and enforcing the Endangered Species Act of 1973. This Act requires that federal agencies:

- 1) use their authority to carry out programs to protect any species designated as an endangered species;
- 2) consult with the Office of Endangered Species of the USFWS whenever their actions may jeopardize an endangered species; and,
- 3) ensure that their actions do not endanger or jeopardize designated species. This requirement is accomplished by either not issuing the requested permits or by mitigating potential impacts.

Section 7, the requirement that consultation must occur between the federal agency and the USFWS Office of Endangered Species, became an issue with the Grayrocks Dam proposal. The endangered Whooping Crane occupies a section of the North Platte River in Nebraska and could be affected by diminished water flow in the river. The U.S. Army Corps of Engineers' 404 dredge-fill permit and the Rural Electrification Administration's loan guarantees, are both federal actions requiring consultation with the USFWS.

The U.S. Army Corps of Engineers Under Section 404 of the Federal Clean

Water Act, the Army Corps is required to review any request to place dredge and fill material in a U.S. waterway. (Reilly, 1979) When MBPP wanted to begin Grayrocks Dam construction, it applied to the Army Corps for this 404 permit. Although the endangered species habitat along the North Platte River had not yet been designated as critical, the designation process was underway. Regardless, under Section 7 of the Endangered Species Act, the Army Corps was required to enter into consultation with the USFWS about potential impacts on the habitat and crane. (Westly, 1979)

The Army Corps did begin consultation with the Office of Endangered Species. It was told, however, that the USFWS had inadequate information and would need approximately three years to do sufficient research before the impact of the dam could be determined. A hearing was held at the Wheatland, Wyoming, project site. The Army Corps then made their own determination that there would be no impact and issued the 404 permit. (Reilly, 1979)

The Rural Electrification Administration (REA) The REA gives loan guarantees to small electrical companies or cooperatives delivering power to rural areas in the U.S. It had guaranteed loans to the MBPP without entering into consultation with the USFWS as directed under Section 7 of the Endangered Species Act. The USFWS had contacted the REA twice, informing it of this requirement, but the REA never responded. The USFWS never commenced action against the REA on this account since conservation groups were already doing so. (Westly, 1979)

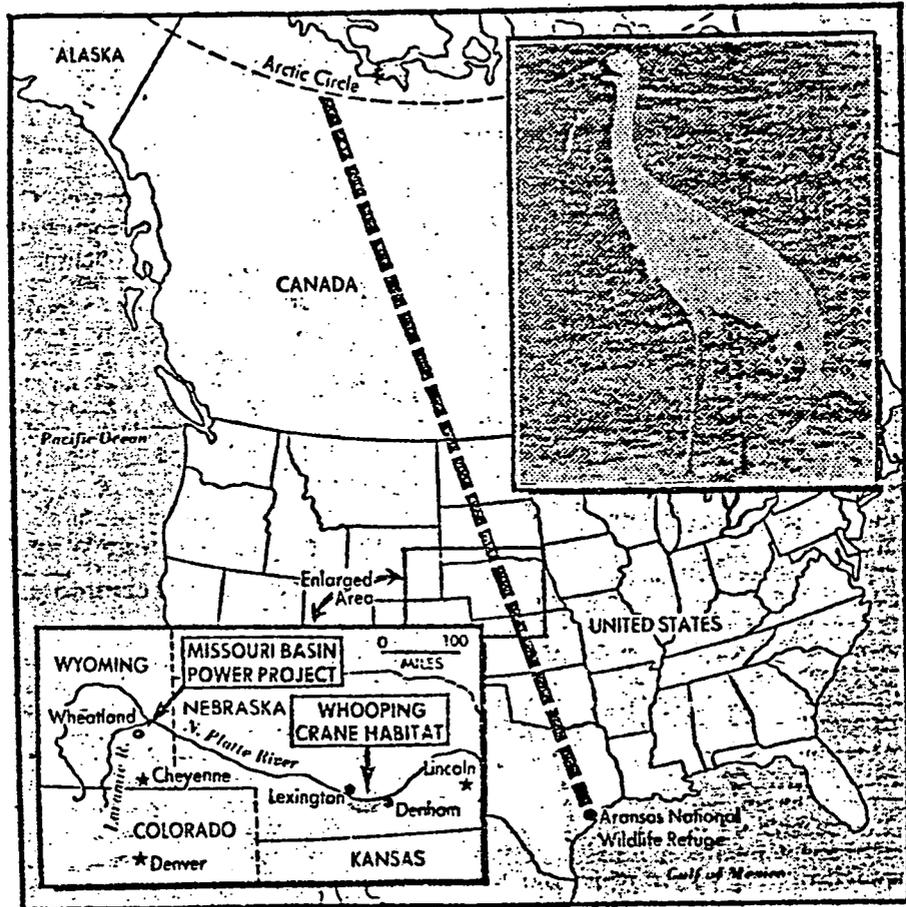
The National Environmental Policy Act (NEPA) NEPA also played a role in the Grayrocks Dam controversy. The EIS required by NEPA was attacked as inadequate on several accounts by conservation groups and Nebraska. These allegations led to several lawsuits, and eventually, encouraged negotiations to avoid extended and costly court battles.

The Issues

During the 50 years preceding this conflict, 43 dams and numerous irrigation projects had diminished streamflow in the North Platte River by almost 70%. The Missouri Basin Power Project facility would consume an additional 60,000 acre feet of water each year to satisfy cooling needs. Conservationists feared that this additional reduction in streamflow would be "the straw that breaks the camel's back" in its effect on North Platte River wildlife habitats. (Calkin, 1978)

The conservationists centered their concerns on the endangered Whooping Crane's critical habitat. Located on the North Platte River in central Nebraska, the habitat is 270 miles downstream from the Grayrocks Dam. It serves as a major stopover on the flyway between the Aransas National Wildlife Refuge in Texas and the Wood Buffalo National Park in Canada (Figure 2). This critical habitat consists of a 60-mile long stretch of sandbars. Flood waters and ice from the annual snow melt have historically

Figure 2: Whooping Crane Habitat and Flyway



By Dave Cook—The Washington Post

Broken line indicates route of the whooping crane's annual migration.

Source: The Washington Post, November 27, 1978.

scoured the sandbars and kept them free of vegetation. (Wildlife Management Institute, 1979) If streamflow along the North Platte recedes to the extent that this scouring will no longer occur, vegetation will overcome the sandbars and make them unsuitable for the Whooping Crane and other wildlife currently using them. The project's water use, conservationists contended, would diminish the river flow beyond this critical level.

Although the conservation groups were concerned about wildlife in general along the North Platte, they focused their efforts on the Whooping Crane. The crane is protected by the Endangered Species Act and therefore gives the groups a strong legal position in negotiations with MBPP officials. Specifically, groups can sue to enjoin project construction should it threaten the Whooping Crane. The Supreme Court's then recent opinion in the Tellico Dam case gave the groups a high probability of stopping all construction provided they could demonstrate this harm to the endangered species. Additionally, the conservationists were taking advantage of NEPA's EIS requirement to gain further intervention leverage. They contested the adequacy of the EIS in addressing North Platte River habitats and the Whooping Crane.

Water Rights

The water rights issue in the western United States is very complex. Water rights to Laramie River and North Platte River waters have been contested on several occasions. In 1945 and in 1956 the U.S. Supreme Court issued rulings delimiting how water is to be distributed among the three states (Colorado, Wyoming, Nebraska) common to the two waterways. (Snyder, 1979; Wisdom 1979) All three states interpret these decrees differently, though. (Weinberg, 1979) To complicate the issue, each state has developed its own way of reallocating waters perceived as its own. Since these western states are so arid, each has irrigation districts that allocate water to farmers and ranchers, ideally in a manner that maximizes the crop return for water consumed. These districts form large networks of farmers and ranchers who are able to buy and sell "water rights" under supervision and approval of the irrigation boards in their districts. (Weinberg, 1979)

Project officials argued that Nebraska interprets the Supreme Court's rulings in a light most beneficial to Nebraska's interests. (Wisdom 1979) Since Nebraska is furthest downstream of the three states, it has been taking advantage of its share of the water plus whatever was left over from upstream users. As a result, when the Grayrocks Dam was proposed, Nebraska feared they would no longer be able to use the same amount of water previously claimed.

Consequently, project officials argued that the conservation groups "have a larger quarrel" with Nebraska than with the Grayrocks Dam and MBPP. (Weinberg, 1979) Edward Weinberg, MBPP counsel, asserted that Nebraska has been the most inconsiderate user of North Platte River water. He believed that the Grayrocks Dam will affect the Whooping Crane little compared with Nebraska's water consumption. William Wisdom, attorney for Basin Electric (major interest-holders in the MBPP), pointed out that the Kingsley Dam, located on the North Platte River in Nebraska between the critical

habitat and the Grayrocks Dam site, has a 2.1 million acre foot reservoir. He emphasized that "this dam has absolutely no provisions for wildlife or conservation of water use in its operations at all."²

Nebraska, on the other hand, felt that the Supreme Court ruling allocated 75% of North Platte waters to Nebraska.³ It felt that the project's reservoir was too big given the power plant's needs and that water consumption by the plant could be diminished substantially. Further, Paul Snyder, assistant Attorney General for Nebraska, pointed out that the project was creating a new irrigation district, in addition to the dam and reservoir, that would further consume North Platte River water before it enters Nebraska. (Snyder, 1979)

Informal Negotiations

Interplay between these interests began in 1973 when the MBPP established an Environmental Advisory Committee to explore potential environmental impacts of the Grayrocks Dam. (Turner, 1979) It solicited input from concerned environmental groups yet, according to Robert Turner, Wyoming representative of the National Audubon Society, the project officials response to committee advice and recommendations was "negative in every regard." The committee suggested that a smaller plant would supply power needs with less environmental impact. MBPP officials disagreed and disbanded the committee in 1976. Turner feels that project representatives were generally unsympathetic to the needs of wildlife along the North Platte and saw no need to make concessions for wildlife protection. (Turner, 1979)

Informal negotiations began occurring at this point between the MBPP and conservation groups, as well as between the MBPP and Nebraska. (Turner, 1979; Wisdom, 1979) Both interests were trying to convince the utilities to alter their proposal by decreasing water use and including measures to protect the Whooping Crane.⁴

Nebraska and MBPP officials met almost thirty times over the course of the

²The Kingsley Dam and Lake McConaughy Reservoir are entirely privately-owned and operated. As there is no federal involvement in the operation and maintenance of this dam and reservoir, its water use could not be considered when determining impacts upon the Whooping Crane. Originally, MBPP officials and the Army Corps were asserting that the McConaughy Reservoir would be able to offset any water loss by the Grayrocks Dam. (Wisdom, 1979)

³The Supreme Court rulings, because they are vague in calculating river water availability and relative needs, leave a certain degree of interpretation and discretion up to the individual state. As a result, the states still contest the precise distribution of rights to Laramie and North Platte River waters. (Fischer, 1978)

⁴No one was able to recall specifically which group initiated these negotiations. From interviews with representatives of most groups, it seems probable that Nebraska and conservation group representatives originally approached MBPP officials when they determined cause for concern with project plans. When lawsuits became a fact instead of a threat, it is likely that MBPP officials in turn initiated further negotiation efforts.

conflict to discuss their differences. (Weinberg, 1979) William Wisdom asserts that specific water flows were discussed in these negotiations but that Nebraska would never agree to the levels offered. Paul Snyder, on the other hand, felt that MBPP officials were never willing to concede anything in these negotiating sessions. His impression throughout was that MBPP officials were convinced that Nebraska "did not know what they were talking about." Snyder believes these sessions were nothing more than "game-playing" by the MBPP. He asserted that the MBPP was continually telling various officials different stories about what could or could not be done to alter project plans.

Snyder feels the real reason project officials were not eager to seriously negotiate at first was because they believed they had "political clout" that could be used to undermine any lawsuits threatened by Nebraska. These utilities were well known in their service areas and had always received cooperation from state and local officials. Snyder noted that "nobody had ever stood up to them before"; they were "used to getting away with whatever they proposed."

Similar reactions were expressed by the conservation groups. Throughout discussions between these groups and MBPP representatives, the utilities seemed unwilling to seriously consider measures directed towards protecting the Whooping Crane. Turner believed that the MBPP was in essence telling the conservation groups to "go ahead and sue us" as they seemed confident that the conservationists "could never win the suit."

It is likely that the MBPP's confidence during these discussions arose from activities in Washington, D.C., where retiring Rep. Teno Roncalio (D-Wyo) was completing his final term. Pleading:

Do you want to send me back to Wyoming, after ten years as your friend and colleague, to face 2,000 unemployed people in Wheatland on account of a totally unjustified thing like this, the Endangered Species Act?
(Washington Post, 11/27/78)

Roncalio convinced the House to pass a bill exempting the Missouri Basin Power Project from all federal requirements. When the bill moved on to the Senate Conference Committee, it was altered substantially to exempt the project solely from the Endangered Species Act. Furthermore, this exemption was only to be valid if the newly-established Endangered Species Committee were to decide so after considering the issue "expeditiously."⁵

⁵When the Endangered Species Act came up for extension in Congress in November, 1978, it was attacked as being inflexible. As a condition to extending the Act, Congress established the Endangered Species Committee. This committee is to review "irreconcilable conflicts" involving endangered species that are unable to be resolved through the Act's provisions. The committee is to grant exemptions for projects that otherwise fall under the Endangered Species Act "only if it concluded that the public interest is best served by completing the project, that no reasonable and prudent alternatives exist, and that the project's benefits clearly outweigh the benefits of any alternative courses of action which would conserve the species or its critical habitat." (Cahn, 1979; Yaffee, 1982)

Litigation

Intervening groups would rather have avoided the time and expense involved in fighting the MBPP in court. Since informal negotiations had failed to remove the need for lawsuits, this approach remained the only alternative to having their concerns realized and acted upon. Using their only leverage _ NEPA and the Endangered Species Act _ the conservation groups and Nebraska took the MBPP to court.

The first lawsuit involving the Grayrocks Dam was filed in 1976 by Nebraska against the REA. (Snyder, 1979) Nebraska alleged that the REA's loans to the MBPP were illegal on the grounds that the project had an inadequate EIS. Nebraska filed a second suit against the Army Corps alleging that the Corps had issued its 404 dredge-fill permit when the project, again, had an inadequate EIS. Nebraska asserted that the EIS was inadequate because it said "nothing" about impacts upon the state of Nebraska's irrigation and municipal water needs nor about the impacts upon the aquatic ecosystem along the North Platte River as it flows through Nebraska. (Snyder, 1979) Several other lawsuits were filed by the conservation groups, again citing an inadequate EIS in addition to a failure to fulfill the requirements of the Endangered Species Act. (Turner, 1979)

All suits were consolidated and all plaintiffs and defendants to original suits were joined to the consolidated suit. As the lawsuit proceeded, some attempts were made by the two sides to negotiate but little progress resulted. (Parenteau, 1978; Snyder, 1979) Both parties felt confident of winning the suit and negotiations therefore seemed unwarranted by both sides. Given the impasse, the court issued its ruling. The court enjoined the project from proceeding, the REA from issuing loan guarantees to the MBPP, and the Army Corps from issuing the 404 dredge-fill permit.

It was at this point, Snyder noted that "the real negotiations started!"

Formal Negotiations

MBPP officials appealed the court's decision and felt confident the injunction would be reversed. Nevertheless, Edward Weinberg, attorney for the MBPP, noted that it was still in their best interest to proceed with negotiations, even given the "probable" court reversal. The appeal would take time; project officials estimated they would be in court a full year. They estimated further that they could lose close to \$500 million if construction were delayed for this amount of time. The MBPP's immediate concern, therefore, was to settle differences as soon as possible so as to proceed with the halted

Any settlement in the Grayrocks case must be conditioned on the approval of this committee. The Endangered Species Committee never ruled on this exemption. By the time the committee had its first meeting on January 23, 1979, an agreement between all parties in the Grayrocks conflict had been reached so that the exemption was a moot point. The committee then simply ratified this agreement, thereby exempting the project from the Endangered Species Act for as long as the agreement was upheld.

construction. Reaching a quick settlement seemed to be the expedient approach given the time and money expected to be consumed by an appeal process. (Weinberg, 1979)

The conservation groups also agreed to negotiate even though it seemed that they had everything leaning in their favor. Turner (National Audubon Society) explains that they did not want to "win the lawsuit but lose the issue." He believed it was "better to resolve a conflict without a lawsuit." His organization saw in this conflict a potential for resolution and chose to negotiate rather than wait for the court appeal outcome. (Turner, 1979) Patrick Parenteau, attorney for the National Wildlife Federation, commented that it "is a good project from an environmental standpoint," and that the National Wildlife Federation (NWF) was not seeking to permanently stop its construction. Rather, they wanted to see some modifications to it such that the Whooping Crane would be protected. Parenteau did not believe that any of the intervenors were set on completely halting the project. He asserted that intervenors wanted "accommodation" such that environmental concerns would be addressed sufficiently to protect the crane's critical habitat.

The uncertain outcome of the Endangered Species Committee meeting on whether or not to exempt the project from the Endangered Species Act also undoubtedly influenced these groups to negotiate rather than prolong court battles. Neither group could feel confident about the committee's ruling since the committee had never before met to resolve any issue.

The formal negotiations leading to a final settlement occurred during three meetings: one in Lincoln, Nebraska, in mid-October, 1978, and two in Cheyenne, Wyoming, on November 2-3, 1978. Snyder described these negotiations as having "come about in a strange way." MBPP officials had maintained contact with REAN and other groups favoring the proposed plant and dam. While these people were not parties to any of the lawsuits, they stood to benefit by the project and were concerned about the outcome of the dispute. The MBPP sent these people as intermediaries to Wyoming and Nebraska's attorney generals to inquire whether or not they would be willing to negotiate now. Both states agreed, as did the conservation groups.

Lincoln Meeting

The first meeting in Lincoln was more symbolic than a serious negotiating session. Patrick Parenteau believed that, to a large extent, the two states used these meetings for "political posturing" purposes as elections were forthcoming and state water rights were at stake. About 60 individuals participated in the first meeting in Lincoln with the two governors serving as co-chairmen. The participants included representatives of all parties to the lawsuits, several Nebraska and Wyoming government officials, MBPP officials and representatives of the REAN. In this meeting, the parties determined that it was possible for them to reach an agreement and that they should meet and formally negotiate later. They selected six individuals to participate in these formal negotiations whom they felt reflected the divergent interests involved. These six were:

Nebraska's attorney general, Nebraska's Director of Water Resources, Basin Electric's James Grahl, MBPP attorney Edward Weinberg, Patrick Parenteau of the National Wildlife Federation and David Pomerly of the Nebraska Wildlife Federation. They were instructed to immediately develop and distribute their "bottom-line proposals" which would form the basis for the negotiations. Although no negotiations per se occurred in Lincoln, all parties seemed pleased with the progress that was made towards negotiation there.

Cheyenne Meeting

When the next meeting commenced a few weeks later in Cheyenne, the six participants were accompanied by their technical advisors and legal counsel. Immediately, participants realized that the size of the group was unwieldy and was leading to little progress. Thus, they devised a different approach. Advisors and counsel assembled in an adjacent room while the six representatives met as a closed group to discuss the essence of their differences and where possible concessions could be made. Whenever one of the negotiators had a question he could simply leave the negotiations and consult with his experts. There was no mediator or arbiter presiding over these negotiations. Use of a third party was never actually considered by the participants. They felt negotiations could be successful without such outside help since all parties wanted the conflict to be resolved.

At the end of two days of negotiations, the parties had agreed to a 21-point settlement. thirty days later, a formal, binding agreement had been drawn together and signed by all parties.

The Settlement

Although the settlement has 21 points of agreement, these can be categorized into two general accords:

- 1) a \$7.5 million trust fund for protection of the Whooping Crane, and
- 2) minimum streamflow levels that vary for different seasons during the year for the North Platte River.

Before the Wyoming negotiations, MBPP officials decided to offer \$15 million to the intervening groups. (Wisdom, 1979) This money was to be used by the conservationists and Nebraska to purchase water rights to maintain whatever streamflow level they thought appropriate. Additionally, some money could be used to artificially protect the Whooping Crane's critical habitat. MBPP officials derived the \$15 million value through calculations of how much they could afford to pay, how much they could potentially lose if a settlement was not reached and approximately what amount the concerned parties would need to satisfy their needs. (Wisdom 1979) No one was able to recall the specific formula used to obtain this value, though.

The MBPP presented the \$15 million offer to participants in the Cheyenne negotiations. The money was rejected for several reasons. Nebraska wanted a guaranteed streamflow through the state and did not feel assured by this offer that it would be obtained. Moreover, Nebraska officials viewed money offers as "very suspect." Snyder comments that Nebraska realized the negotiations were constantly in the public's eye, and as a result, it wanted to make sure that the "state of Nebraska was not given any money except legal fees." Nebraska wanted to be sure that the money did not appear to be a "payoff to Nebraska." (Snyder, 1979)

The conservation groups also wanted guaranteed minimum streamflows. They were unsure how successful they could be at maintaining specific streamflow levels through water rights purchases. Guaranteed streamflows would make their efforts to protect the Whooping Crane's habitat more likely to succeed.⁶ (Parenteau, 1979; Turner, 1979)

When the \$15 million offer was rejected, project officials met to develop their next offer. The second offer halved the money to \$7.5 million and provided several water concessions. Discussions involving the \$7.5 million offer were not as directed as those occurring over water use. Since water levels were the major contention, the offer of money caught Nebraska and the conservation groups by surprise. (Parenteau, 1979; Snyder, 1979) Never did they discuss the value of \$7.5 million versus, for example, \$7 million or \$8 million. As result, they never determined that \$7.5 million was the appropriate amount of money to protect the Whooping Crane.

Both groups were hesitant to discuss receipt of money as part of any agreement. Nebraska feared that it would appear as though it was "selling out" to the utilities for money and thus not upholding the best interests of its citizens. (Snyder, 1979) The National Wildlife Federation did not feel it could fulfill its *raison d'être* without risking its reputation if it accepted money from the utilities. (Parenteau, 1979) Given these hesitations, participants began discussing alternative means of addressing the Whooping Crane's needs. They did not want to subject Nebraska and the conservation groups to public misconceptions. It was at this point that Patrick Parenteau devised the trust fund idea. Paul Snyder emphasized that it was the development of this "independent" trust

⁶In Nebraska, as in several western states, water is allocated by the state to users only if it will be put to a "beneficial use." "Beneficial uses" include agriculture, mining, municipal water needs, recreation, and the maintenance and propagation of fish and wildlife. The intent behind the \$15 million offer was that this money could be spent purchasing water rights and artificially protecting the Whooping Crane's habitat. It seems at face value that this would legitimately fall under the "maintenance and propagation of fish and wildlife" intention. There is a catch in western water law, though, which states that any "beneficial use" must entail "physical removal of the water from the stream" (Calkin, 1978; Fischer, 1978) The Wildlife Management Institute, a privately-funded scientific organization devoted to the restoration and improved management of wildlife, asserts that the only way money will be useful in boosting stream flows is if the negotiators can "change Nebraska state law." (Williamson, 1979) The U.S. Fish and Wildlife Service believes that there are "ways to get around these restrictions." The fact that Nebraska was participating in the negotiations led participants to believe that there would be no problems with purchasing water rights to be left in the river. (Turner, 1979)

fund with a separate board of trustees that made the final settlement acceptable to Nebraska.

This "change in name" of the \$7.5 million offer assured that the money would actually be used for its designated purposes and thus removed appearances of misconduct by Nebraska or the conservation groups. The trust fund is established for perpetuity. Its yearly interest is invested in protective measures for the Whooping Cranes and their habitat. The settlement is a legally-binding contract, signed by all parties to the negotiations. It has a monitoring stipulation included to assure implementation of its provisions.

Conclusion

The Grayrocks case illustrates how parties in a dispute weigh their different options and their likelihood of success. It was not until the uncertainty posed by the Endangered Species Committee's eventual ruling that each perceived that they could possibly be worse off without than with negotiations. They chose to negotiate when they realized that not negotiating could possibly lead to an outcome which would be less desirable.

The extent and success of negotiations with Grayrocks followed closely the shifting leverage by different parties throughout the process. The utility's bargaining leverage included the fact that the project was going to increase the region's energy resources, provide irrigation water to Wyoming for agricultural expansion, provide jobs and economic development stimulus, and tax revenues to Platte County, Wyoming. Further, the utilities had money and expertise resources which could be used as potential means of compensation. Nebraska and conservation groups also possessed bargaining leverage. They had a court victory leaning in their favor and felt confident the appeal would not overturn the earlier court decision. They had the potential absolute power of the Endangered Species Act, should the Endangered Species Committee rule in their favor. Further they could continue to impose costly delays which the MBPP wanted to avoid. Thus, in the Grayrocks Dam case, the conflict reached the point wherein all parties possessed the means and the desire to negotiate. Negotiations therefore occurred and were successful.

It is only obvious that the MBPP would rather not have had to negotiate. When faced with costly delays due to litigation by Nebraska and the conservation groups, they are pleased that the settlement allowed them to get on with their work at a lesser cost than would drawn-out court battles. Basin Electric Power Cooperative general counsel, William Wisdom, provided the following analogy of his company's reaction to the settlement:

A young man, walking along a street in his hometown, encounters an elderly gentleman who is an old family friend. The young man asks congenially, "How are you enjoying your old age?" to which the elderly

gentleman can do little more than reply, "When I think about the alternatives, just fine!"

The MBPP would much rather not have to pay the \$7.5 million nor concede to reduced water consumption, but, given the delays and costs inherent in other approaches to gaining approval to restart construction, the settlement was quite attractive to them.

Similarly, conservation groups viewed negotiations and a settlement as a more desirable alternative to extended litigation. While it is true that these conservation groups, like the utilities, were uncertain about the Endangered Species Committee ruling, they also did not have the resources to continue in a court battle.

The Grayrocks Dam dispute was the first major endangered species versus development dispute to be resolved through collaborative negotiations. It occurred a short 5 years after passage of the Endangered Species Act. It is interesting to note the varying perceptions of the conservation and development communities as to the legitimacy of the outcome. The National Audubon Society feels the settlement is "excellent" because it is now forcing the utilities to pay "economically what it is costing" to construct this plant. Turner feels that the payment and concessions are "directed at the facility's environmental impacts" and therefore are legitimate compensation. He further emphasizes that "it was not a bribery"; it "was the right thing for the utilities to do."

While Nebraska's Paul Snyder simply comments that Nebraska "got what they wanted," Basin Electric's general counsel Bill Wisdom believes that this settlement "didn't have a damn thing to do with the issues; all we did was buy a lawsuit." Edward Weinberg, MBPP attorney feels that the utilities got the "bum end" of the deal. He saw the negotiations as "the constructive thing to do" but the settlement as misdirected with the time, effort and concessions not meaningful to the real issues.

It is important to note that the conservation groups involved in this dispute stressed all along that they were not opposed to the dam per se, but only to the extent that it threatened the endangered Whooping Crane. They were not using the ESA to try to halt construction of the dam, but instead to try to force the concessions and mitigation necessary to protect the endangered species. Negotiations provided them with the most productive forum within which to discuss specific measures for achieving this outcome.

In this case, the parties were fortunate to have a situation where all sides could be accommodated; where the dam could be constructed and the endangered species could be protected. Moreover, the conservationists recognized this reality very early on in the dispute and structured their arguments and strategies accordingly. Not all endangered species disputes offer such a striking "win-win" outcome.

When interviewed 15 years after the Grayrocks Dam settlement was reached, representatives of the Platte River Trust (trustees for the \$7.5 million trust fund) and other conservationists currently involved in Platte River issues, are still strongly

supportive of the settlement and its effects. The trust fund monies have provided a focus for research efforts and land acquisition on behalf of endangered species along the river. Environmentalists feel that helpful scientific data has been generated by the Trust's activities and that the Trust has been able to accomplish more for the species on the river than has the federal government in the same period of time.

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CASE STUDY #9

THE TERROR LAKE CASE¹

Background

Kodiak Island lies several hundred miles southwest of Anchorage in the Gulf of Alaska. Blanketed in forests and laced with free-flowing rivers, the area provides prime habitat for the Kodiak brown bear, (*Ursus arctos middendorffi*), bald eagles, mountain goats, Pacific salmon, and other Arctic species. Much of the island falls within the bounds of the Kodiak National Wildlife Refuge, which was established by executive order in 1941 to protect the feeding and breeding grounds for the Kodiak brown bear and other native species.² Since then, the boundaries have been altered, but the refuge still encompasses more than two-thirds of the island. Despite its proximity to Anchorage, the island is fairly inaccessible and sparsely populated with somewhere between 5,000 and 7,000 residents, most of whom live in the town of Kodiak. The local economy is based almost entirely on the fishing industry and supports roughly a dozen cannery operations year-round.³

The refuge with its bears and the local residents with their canneries peacefully coexisted until the early 1970s when, faced with rising diesel fuel costs and projected increases in energy demand, the Kodiak Electric Association (KEA) decided to build a 30,000 kilowatt hydroelectric facility on lands within and immediately adjacent to the refuge. In 1976 the Federal Energy Regulatory Commission (FERC) granted the small, rural electric cooperative a preliminary permit to develop the site, which included Terror Lake and Terror River, both of which are within refuge boundaries. The project was to consist of a dam at Terror Lake, which would raise the water level nearly 150 feet and flood 480 acres, a powerhouse located in the Kizhuyak River Basin adjacent to the refuge, and a diversion tunnel connecting the reservoir and powerhouse. Two 10,000 Kilowatt generators would be housed in the powerhouse with room for installation of a third. Water diversion resulting from the project would increase streamflow 5 percent in the Terror River and 300 percent in the Kizhuyak River during the winter months.⁴

KEA's interest in developing the site was not new. In 1964, KEA applied for and received a permit from FERC (then FPC), which expired before KEA could secure financing. However, by 1976 the nation's energy outlook and KEA's financial situation had changed, making development of the site more attractive. But the real catalyst for

¹This case study was developed by Harlin Savage.

²Olive, Stewart W. and Lamb, Berton L. Conducting A FERC Environmental Assessment: A Case Study and Recommendations from the Terror Lake Project. U. S. Fish and Wildlife Service, Fort Collins, CO. April 1984.

³Telephone interview with Keith Bayha, USFWS Regional Office, Anchorage, AK. March 1991.

⁴Oliver, Stewart W. and Lamb, Berton L. Conducting A FERC Environmental Assessment: A Case Study and Recommendations from the Terror Lake Project.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

negotiation was the dramatic shift in the national political climate following Reagan's successful 1980 presidential bid. The project had the determined backing of Reagan's Interior Secretary James Watt and Assistant Secretary William Horn as well as Alaska's congressional delegation.

While KEA, the Alaska Department of Natural Resources (ADNR) and the Department of Fish and Game (ADFG), the U.S. Fish and Wildlife Service Regional Office (USFWS), and the Department of the Interior had been battling over the proposed development since 1976, intense pressure from higher-ups in Washington to find "an Alaskan solution" changed the dispute's dynamics and created a strong incentive to settle. It also gave the national environmental groups, who had not been heavily involved until then, reason to participate. The parties reached agreement on June 26, 1981 five years after FERC granted KEA's request for a preliminary permit.

The Parties

1. The Kodiak Electric Association (KEA) wanted a cheaper way to meet electricity demand. The fishing industry was flourishing in the mid-1970s and local canneries, which are energy-intensive operations, were planning to expand. Recognizing that the USFWS and environmental groups, both of whom officially "intervened" in the FERC licensing process, could force an administrative hearing and delay the project for up to two years, KEA aggressively pursued negotiations. David Nease, who serves as an executive manager for KEA and represented the company in the negotiations, estimated that it would have cost KEA \$1 million for every month the project was delayed.
2. The U.S. Fish and Wildlife Service's Regional Office initially opposed the project for several reasons. First, staff feared that allowing major hydroelectric development in a National Wildlife Refuge would set a dangerous precedent. Second, the agency was concerned that its jurisdictional claim to refuge lands was being challenged. And finally, the agency was concerned that the project would spoil potential wilderness areas. The USFWS had recommended that Congress set aside 97 percent of the refuge as wilderness.

However, because the Reagan Administration supported the project, the regional office was forced to reverse its position. The USFWS' objective then shifted to ensuring adequate mitigation. After the political climate changed, Keith Schreiner, Director of the Regional Office, took the issue away from the Refuges Division staff and handed it over to Keith Bayha, the Assistant Regional Director for the Environment. Bayha, who represented the USFWS in negotiations, had a more favorable view of the project and was, at the time, a relative newcomer to the regional office staff.

3. The State of Alaska supported the project wholeheartedly. The State Legislature wanted to promote hydroelectric development in Alaska and was ready to provide

funding to support projects. The state's congressional delegation, especially Rep. Don Young, strongly supported the project too. However, the state agencies were the only ones directly involved in the negotiation. The Alaska Department of Fish and Game supported the project and wanted to ensure that the Kodiak brown bear and the fishery resources would be protected. The Alaska Department of Natural Resources also supported the project and believed that Kodiak needed the project. However, the ADNR does not appear to have been heavily involved until it became clear that a negotiated settlement would affect state-owned lands.

4. The Sierra Club, the National Audubon Society and the National Wildlife Federation were the major environmental groups involved. These groups did not intervene in the process because they believed the USFWS would protect the refuge. The alternative, according to Jack Hession, staff member for the Sierra Club, was to fight the dam in a FERC administrative hearing. But he does not think they would have prevailed in that forum.
5. Federal Energy Regulatory Commission (FERC) was primarily involved as mediator. FERC staff supported the project and wanted to avoid an administrative hearing and potential litigation. Apparently FERC staff were sensitive to environmental concerns and urged the parties to have extensive scientific studies done so decisions would be based on sound data.⁵ FERC was not however, the typical neutral third-mediator. Its bureaucratic mission precluded such a role.
6. The Alaska Power Authority (APA) was an "interested observer." Although the agency saw the negotiation as potentially precedent-setting and wanted to limit KEA's concessions, it was never an active player. APA took over the license from KEA in 1982 and is pursuing other hydroelectric development projects in Alaska.⁶

The Issues and the Process⁷

Two broad issues emerged as central to this conflict. The first was a jurisdictional dispute between FERC and the Interior Department over which agency had authority to grant KEA development permits. DOI cited the Alaska National Interest Lands Conservation Act for its authority and FERC pointed to the Federal Power Act. This turf battle was further complicated by the USFWS insistence that KEA get a special use permit because the project would affect refuge lands. DOI formally opposed the project for jurisdictional reasons in 1974. FERC, however, ignored the complaint and granted KEA's preliminary permit. The inter-agency squabble was never explicitly settled. Apparently, FERC and KEA continued to ignore DOI and the USFWS whenever it seemed politically expedient to do so.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

With the FERC permit in hand, KEA hired a consultant to do feasibility studies with funds provided by the Alaska State Legislature.

Under the National Wildlife Refuge System Administration Act, the Interior Secretary may authorize certain types of development on a wildlife refuge provided that "such uses are compatible with the purposes for which these areas are established." The issue of whether the development was "compatible" with the refuge's purpose also was in dispute. Some USFWS staff, mainly the Refuges Division, maintained that KEA had to get a special use permit. Refuges staff opposed the project fearing a dangerous precedent and because Congress had yet to act on pending wilderness designations. Meanwhile, the Ecological Services Division was involved in reviewing KEA's studies and proposals.

In 1979, KEA applied for a FERC license even though it had not included FWS comments required by FERC regulations. FWS responded by sending KEA a letter stating its intent to file an incompatibility finding and suggested that KEA should examine alternative energy sources and hydroelectric sites away from refuge lands. In the meantime, KEA had hired a political consultant who advised the company to forget about getting FWS approval and focus instead on the FERC licensing process. Several months later, the FWS issued an incompatibility finding.

In response to the FWS action, KEA undertook more studies to appeal the incompatibility finding. Most of the contract work for KEA was done by the Arctic Environmental Information and Data Center (AEIDC), a consulting firm affiliated with the University of Alaska. FERC, sensing that an administrative hearing was near, intervened and required KEA to do extensive analysis of wildlife and fish populations, habitat evaluation, instream flow analysis and potential effects of development. FERC also kept reminding the parties of the alternative to negotiation: a lengthy and costly hearing that could leave FWS without any mitigation or delay the project long enough to make it financially infeasible.

The second major issue was mitigation. How much land from what part of the island would compensate for damaged bear habitat? And, what level of instream flow at what time of year was necessary to avoid harm to indigenous salmon and trout populations? This aspect of the dispute was essentially over scientific methodology (i.e. which type of instream flow model to use and how to assess habitat loss.)

FWS and AEIDC disagreed on what methodology should be used to evaluate terrestrial habitat losses. AEIDC refused to use the Habitat Evaluation Procedures (HEP) favored by FWS. AEIDC instead used a "traditional inventory analysis" through direct observation. FWS went ahead and did its own cursory HEP review.

In 1981, FWS alerted KEA as to what it wanted included in the license for mitigation, including 50,000 acres to offset habitat loss. KEA countered by offering 14,000 acres which equaled the total acreage lost through flooding and road construction. Eventually, they settled on 28,000 acres at Kiliuda Bay adjacent to the refuge and a

change in management of 50 percent of the Shearwater Peninsula. The instream flow issue was easier to resolve because the parties agreed to a methodology early in the process.

The Agreement⁸

The parties successfully completed the negotiation in the spring of 1981. Under the agreement, the direct loss of 14,000 acres of bear habitat would be compensated for in two ways: First, the Alaska Department of Natural Resources agreed to manage 28,000 acres of state-owned land contiguous to the refuge at Kiliuda Bay as though it were part of the refuge. Both the USFWS and the environmental groups were satisfied that this area was good bear habitat and would be adequately protected. In addition, the state agreed that at least half of the Shearwater Peninsula, which had been included in the refuge at one time, would be designated as wildlife habitat where grazing would be prohibited. The state also agreed to modify its land disposal program for the other half of the Shearwater Peninsula.

In addition, the agreement codifies the instream flow regime developed by the parties. KEA agreed to increase the storage capacity of Terror Lake Reservoir and to discharge enough water to meet the minimum stream flow requirements specified by the parties. The parties also agreed to study for 4-5 years the effects of the stream flow agreement on fish populations and to adjust them if necessary based on monitoring data.

KEA agreed to contribute \$500,000 to the establishment of a trust fund, which will support research on the brown bear and other wildlife as well as the acquisition of additional habitat. KEA and the environmental groups also agreed to jointly recommend to the Alaska State Legislature that it authorize funding for a Kodiak Island alternate energy study.

To address concerns about the agreement's precedent-setting potential, the parties specifically stipulated that the agreement was not to be considered a precedent and "would not constitute a waiver of the position of any of the parties with respect to any other project."

The parties also agreed that:

- They would not challenge the adequacy of the Final Environmental Impact Statement.
- FERC would not require that recreational facilities accompany the project, in order to minimize potential conflicts between bears and humans.

⁸Olive, Stewart W. and Lamb, Berton L. Conducting A FERC Environmental Assessment: A Case Study and Recommendations from the Terror Lake Project.

- The agreement would be void if FERC refused to grant KEA an operating license.

Effects on the Endangered Species

Although the brown bear is listed as threatened in the lower 48 states, the species is thriving in Alaska. Studies to date suggest that the effects of the project on the Kodiak bear population were minimal, at least in the short-term. Research conducted by the Alaska Department of Fish and Game between 1982 and 1986, indicated little, if any, fluctuation in the bear population. According to Roger Smith, the biologist who did much of the work, "the bears apparently coexisted with the development."⁹ Actual construction affected an area that was only lightly used by the bears and was not used for denning. The primary effect on the bears was from construction of the road and powerline, which improved access to the area and increased the potential for conflicts between bears and people. Smith says that after two years of post-construction work, he has not witnessed any catastrophic effects on the bears. However, he writes that: "Improved vehicular and foot access provided by constructed roads and powerlines, and the increased incentive for development of rural lands provided by surplus electric power, is expected to have long-term impacts on bears through increased disturbance and killing of bears by tourists and settlers."¹⁰

Despite this sanguine assessment, it should be noted that baseline data on bear population and activities was scarce. Prior to construction, AEIDC was hired to do a one-year study of the bears, which consisted of direct observations and several months of aerial surveying. Smith admits that this research was "pretty darn cursory." However, he says, "we had nowhere near the horsepower to do the studies we needed in advance."

Smith is quick to point out that without the agreement, the ADFG would not have had the money to support the research that has occurred since 1981. Two projects, a bear census and an ongoing study of reproductive activity, were partially funded through the trust fund.

As for the salmon, research results are not in yet. Data collected through monitoring was seriously flawed and researchers have been unable to draw any conclusions.¹¹

Parties Attitudes Toward the Agreement

All of the parties interviewed spoke favorably of the negotiation process.

⁹This section is based upon a telephone interview with Roger Smith, Alaska Department of Fish and Game. March 1991.

¹⁰Smith, Roger B. "Impacts of Hydroelectric Development on Brown Bears, Kodiak Island, Alaska." See also "Denning Characteristics of Brown Bears on Kodiak Island, Alaska."

¹¹Telephone interview with Smith.

Environmentalists reflected that given the prevailing political climate, negotiations were the best alternative. Jack Hession, who represented the Sierra Club, said, "It was the best deal we could get under the circumstances."¹² Hession insists that the agreement did not set a precedent and has no implication for hydroelectric development on other National Wildlife Refuges. "We made no suggestion that we would play that game again," he said. "The reverse may be true. We will fight harder against such developments in the future."

Hession thinks environmental groups' participation enhanced the process and resulted in an agreement that provided more protection for fish and wildlife. "Our intervention gave the USFWS leverage. Without us, I hate to think what would have happened. The USFWS might have been less able to get mitigation." The environmental groups relied heavily on the expertise of USFWS biologists and others to evaluate data and develop acceptable mitigation plans. According to Hession, they were confident that the biologists working on instream flow and terrestrial habitat evaluation knew what they were doing.

As for whether negotiations are useful, Hession said that, "Negotiations are worth a try at least. They can lead to productive results, but a lot depends on context. Before we decide to negotiate, we ask ourselves, 'Is this advisable given the current national political situation?'"

Bayha agreed that the environmental groups involvement was an asset. "We looked more reasonable than they did," Bayha said. "The environmental groups enhanced our credibility. Without them, we would have had less in the way of mitigation." Bayha thinks the USFWS won more than it lost in the deal and added that, "If you accept that the project will be built, then negotiation is a good idea because you can compensate for the adverse effects of development."¹³

Lessons

Clearly, environmental group participation in these negotiations was critical to securing maximum mitigation measures as Hession, Bayha and others have noted. However, the national groups got involved fairly late in the process because they thought the USFWS would protect the refuge. Had they gotten involved earlier, they might have been more effective.

It is interesting to note the role played by environmentalists in strengthening the hand of the USFWS scientists facing political pressures. The USFWS' reversal of its original position illustrated that while the agency is ostensibly looking out for the endangered species, for political or administrative reasons, such as lack of funding and staff, they may be impeded from doing so consistently and aggressively.

¹²Telephone interview with Jack Hession, Sierra Club, Anchorage, AK. March 1991.

¹³Telephone interview with Bayha.

The case also points out the importance of adequate scientific information. While data on bear populations was hastily collected and less than comprehensive, the agreement provided for wildlife studies that would not have been done otherwise and provided for ongoing scientific research. The result is a Catch-22 in which environmentalists may not be able to get the scientific information necessary to make the best agreement until an agreement, providing funding for research, is reached. This reality argues for implementable contingent agreements. In the Terror Lake case, the resident wildlife populations do not appear to have suffered though the results are not yet in for salmon and trout.

CASE STUDY #10

BACHMAN'S WARBLER: THE PHANTOM SONGBIRD¹

Background

Bachman's warbler (*Vermivora bachmanii*) is a rare songbird of the Southeastern United States. Named for Rev. Dr. John Bachman, the minister who discovered it south of Charleston, South Carolina in the 1830s, the warbler measures about four inches in length and is marked by its olive-green back, black crown and yellow abdomen.² The songbird has the dubious honor of being one of the first species protected under the Endangered Species Act.³ Yet more than 20 years of official protected status has not helped to reverse the population's decline. The last documented warbler sighting occurred in the late 1960s in I' On Swamp, not far from where Reverend Bachman first found it. In fact, virtually all of the nests ever found were in the swamp, part of which lies within South Carolina's Francis Marion National Forest.⁴ A few reported sightings in Florida and Cuba suggest the warbler may not be extinct, but no breeding populations are known to exist.⁵ Despite fairly extensive monitoring by the U.S. Forest Service and others, no one has proven Bachman's warblers still inhabit the forest.

Relatively little is known about the species or its habitat requirements. All of the available scientific literature is qualitative, much of it from field journals written half a century ago by people who were more interested in recording sightings than observing its habitat needs and reproductive behavior. Because the literature is scarce and incomplete, experts differ about its meaning. Disagreement over what constitutes prime habitat, particularly for nesting, was at the heart of this case. Though few people have actually seen the warbler, it continues to arouse the passionate curiosity of amateur birders and professional ornithologists alike. One of those people, Jay Shuler, a South Carolina native, has nicknamed it "the phantom" warbler. Shuler has roamed South Carolina's forests for years looking for the elusive songbird to no avail, though he claims to have heard its song. His keen interest in the species and in protecting South Carolina's National Forests from excessive logging was the catalyst in this case.

The Bachman's warbler dispute started in 1976 with a Forest Service management plan that called for clearcutting in and around the I' On Swamp. Shuler, then president of The Santee Preservation Society, a local affiliate of the National Wildlife Federation, strongly opposed the timber harvest, which he argued would destroy potential nesting habitat for the warbler.⁶ Convinced the species favored "mature, dense-canopied swamp forest," Shuler adamantly opposed logging in and around the swamp. Other experts did not share Shuler's conviction. Paul Hamel, biologist and author of Bachman's Warbler: A Species in Peril, and Bob Hooper, a Forest Service biologist, maintained that the best nesting habitat is disturbed areas, where the overstory is open and the understory is thick

¹This case study was developed by Harlin Savage.

²*Charleston News and Courier*, May 29, 1976.

³Hamel, Paul. Bachman's Warbler: A Species in Peril, 1986.

⁴*Charleston News and Courier*, "Warbler Waylays Woodmen," May 29, 1976.

⁵Telephone interview, Paul Hamel, biologist and warbler expert, Nashville, TN. March 1991.

⁶Telephone interview with Jay Shuler, McClellanville, SC. March 1991.

Source: Steven L. Yaffee and Julia M. Wondolleck, *Negotiating Extinction: An Assessment of the Potential Use of Alternative Dispute Resolution Techniques for Resolving Conflicts Between Endangered Species and Development* (Ann Arbor, MI: School of Natural Resources and Environment, The University of Michigan, September 1994), a report prepared for the Administrative Conference of the United States.

with brush.⁷ In general, however, all seemed to agree that the warbler likes hardwood, bottomland forests typically located in flood-prone areas. Regardless of which school of thought was correct, clearcutting was not in the species' best interest. When complaints and public comments failed to persuade the Forest Service to abandon its logging plans, Shuler persisted. Joined by the Charleston Natural History Society, a local affiliate of the National Audubon Society, Shuler's group threatened to sue the Forest Service under the Endangered Species Act⁸ and enlisted the help of Robert Golten, an environmental attorney who had recently won a landmark case to protect Mississippi Sandhill Crane habitat.

The Parties

1. The Santee Preservation Society and the Charleston Historical Society were primarily interested in protecting Bachman's warbler. Shuler was clearly the driving force behind the effort to prevent clearcutting in warbler habitat. He called Golten after reading an article about the Mississippi Sandhill Crane case and convinced him to get involved. While Shuler was deeply concerned about the warbler, he also was highly critical of Forest Service management practices in general and shortly after the warbler case was resolved, he was battling the Forest Service over wilderness designation under the agency's Roadless Area Review and Evaluation (RARE II). The group's alternative to negotiation was to drag the Forest Service into court, but without proof that the warbler currently inhabited the swamp—no one had seen the bird in 10 years—the odds were not in their favor.
2. Robert J. Golten is an environmental attorney who practices in Boulder, Colorado. At the time of the warbler dispute, Golten was counsel for the National Wildlife Federation and had litigated several endangered species cases. He remembers going to South Carolina and spending a day rambling through the forest looking for the warbler with Shuler. "We never saw one," says Golten. "So I said, 'Jay, we're going to have a helluva time fighting this if we can't even find the bird.'"⁹ Golten recalls that he was the one who suggested negotiation, and Shuler agreed. Although Golten was the legal representative of the Santee Preservation Society and the Charleston Historical Society, his role was basically that of a mediator.
3. The USDA Forest Service supported their management plan but was not eager to invite a lawsuit. In addition, the Forest Service may have been hoping to avoid a jeopardy opinion by adopting the recommendations of the expert panel that the parties eventually formed.
4. The U.S. Fish and Wildlife Service, though not a party to the agreement, became involved in 1978 when the Forest Service initiated consultation as mandated under Section 7 of the Endangered Species Act.

The Issue

Would clearcutting as proposed in the management plan for the Francis Marion National Forest destroy nesting habitat for the Bachman's warbler? That was the issue around which the dispute revolved. Shuler said yes. The Forest Service said no. The matter was simple enough: logging versus an endangered species.

⁷Hamel, Paul. Bachman's Warbler: A Species in Peril, 1986.

⁸Telephone interview with Shuler. *Charleston News and Courier*, May 29, 1976

⁹Telephone interview with Robert Golten, Boulder, Co. March 1991.

The Process¹⁰

The problem was that while Mississippi Sandhill Cranes were extant and could make a courtroom appearance if necessary; Bachman's warblers were not. Following his walk in the woods with Shuler, Golten suggested that Shuler consider negotiations. With Shuler's permission, Golten approached the District Ranger's staff with the idea. They quickly agreed and after a two-hour meeting, a settlement was reached. According to Golten, he suggested that Shuler and the Forest Service establish a panel of three experts—one to be selected by the Forest Service, one to be selected by Shuler, and the third to be selected by the first two. The panel would review all of the scientific literature on the warbler and render a draft advisory opinion. A public hearing would be held to solicit public comments on the draft and then the panel would issue a final opinion. The parties would abide by the panel's final recommendation. Shuler would have to agree not to sue the Forest Service, and the Forest Service would put a moratorium on logging until the panel finished its work.¹¹ The parties agreed.

Implementation

Shortly afterwards, the moratorium took effect and the parties selected the panel. Shuler named Dave Marshall, a U.S. Fish and Wildlife Service biologist in the Washington Office of Endangered Species, the Forest Service named Bill Zeedyk, its Endangered Species coordinator, and the two of them named Fred Evenden, then president of the Wildlife Society.¹² The three panelists spent the spring and summer of 1976 engaged in field work and an exhaustive review of all scientific literature pertaining to the warbler. In August, the three panelists issued their draft advisory opinion. A lengthy public hearing followed at which Shuler, noted warbler experts and others testified. The panel reconvened and issued its final opinion, which called for establishment of Bachman's warbler preserves in I' On Swamp and Little Wambaw and Wambaw Swamps where clearcutting would be prohibited. The opinion also recommended that the Forest Service create, through carefully controlled cutting, areas that might attract warblers such as those described by Hamel, Hooper and others.¹³ The parties accepted the final opinion as stipulated in their agreement.

The Forest Service subsequently incorporated the panel's recommendations into its management plan and initiated a Section 7 consultation with the U.S. Fish and Wildlife Service. USFWS threw a wrench in the works by initially rendering a jeopardy opinion. An exchange of letters between the Regional Forest Service Office and the Regional Fish and Wildlife Service Office followed and eventually the Forest Service agreed to alter its management plan again. Though the records are incomplete, it appears that the USFWS simply wanted the Forest Service to do more habitat enhancement work. A non-jeopardy opinion was issued by the USFWS in 1979.¹⁴

¹⁰Golten, Robert. "Mediation: A 'Sellout' for Conservation Advocates, Or A Bargain?" *The Environmental Professional*, Vol. 2, pp. 62-66, 1980.

¹¹*Charleston News and Courier*, "Warbler Waylays Woodmen," May 29, 1976.

¹²Golten, Robert. "Mediation: A 'Sellout' for Conservation Advocates, Or A Bargain?" *The Environmental Professional*, Vol. 2, pp. 62-66, 1980.

¹³Hamel, Paul. Bachman's Warbler: A Species in Peril, 1986.

¹⁴Telephone interviews with Nora Murdock, USFWS, Asheville, NC and Bob Hooper, US Forest Service, SC, March and April 1991.

Effect on Endangered Species

Because so little is known about the bird, which may have been well on its way to extinction before Shuler and the Forest Service tangled, gauging the agreement's effect on the warbler is pure conjecture. Hamel, who has spent considerable time looking for it in South Carolina, describes the agreement's effect as "neutral." The Forest Service made the controlled timber cuts as directed, creating what Hamel says was "ideal" warbler habitat. But so far, the sites have not attracted any warblers or at least none that Forest Service monitoring has detected.¹⁵

Parties Attitudes Towards the Agreement

Shuler is still happy with the agreement, though he is bitter about what he recalls as revisions made by higher-ups in Washington, D.C. "I think our agreement was excellent, except that it didn't have the backing of the court." Shuler seems to think that the Secretaries of Interior and Agriculture reversed the deal but could not substantiate his claim because his warbler files were destroyed in Hurricane Hugo. No one else, including Golten, remembers the agreement getting bumped up to Washington. Shuler may be confused about the USFWS' role in the warbler case.

Regardless of problems that arose, Shuler is positively disposed toward negotiation. "Negotiation might fail in one instance, but you learn how to negotiate more effectively by going through the process," Shuler says. "It's important to remember that you don't have to give up the option of taking legal action if negotiations fail." Shuler also says that he and his group were much more effective several years later when they negotiated over RARE II designations in the Francis Marion National Forest. He says they successfully protected much more warbler habitat.¹⁶

Golten thinks that negotiation, in the warbler case, was "a plausible way to deal with a lack of scientific information." As Golten explains, "It's better for the parties to settle the dispute themselves than to let a judge decide. I think negotiation as opposed to litigation is a great idea provided the parties are sane and there is a reasonable balance of power between them."¹⁷

Lessons

This case is, in many ways, an example of a creative use of voluntary, expert arbitration to resolve a scientific dispute. Basically, the parties agreed to disagree and let a three-member panel of experts decide. Participants can claim this negotiation as a success. As a result of the negotiation, the Forest Service issued a temporary moratorium on timber cutting in the forest and modified their management plan to protect the endangered warbler, which had not even been seen in the forest for a decade. Had the groups gone to court, as Golten pointed out, they would probably have lost the case. Whether the same result would have been achieved through the Section 7 consultation process, which was initiated after the agreement was reached, is an open question.

Moreover, the warbler case suggests that redressing the power differential between parties at the negotiating table is critical for success. Environmental groups, especially

¹⁵Telephone interview, Paul Hamel, biologist and warbler expert, Nashville, TN. March 1991.

¹⁶Telephone interview with Shuler.

¹⁷Telephone interview with Golten.

local groups like the Santee Preservation Society and the Charleston Historical Society, benefit significantly from having skilled, experienced negotiators representing them. Had Golten not provided his services pro bono, the two groups might not have had legal representation at all. Golten's presence strengthened Shuler's hand, making fair negotiation possible. Indeed, without Golten as mediator, it is highly unlikely that the negotiations would have occurred.

And finally, the case illustrates one of the chronic problems that plagues negotiations over endangered species disputes: lack of adequate and conclusive biological information. Having the best scientific information available, which usually means undertaking new research, is essential to crafting an agreement that will benefit, or at least not harm, the species. Here, as in other cases, the parties relied on outside experts to collect and analyze biological data and make recommendations that strongly influenced the final shape of the agreement. Politics aside, whether the agreement affords the endangered species adequate protection is a direct function of the quality and credibility of the scientific research on which it was developed.



CASE STUDY #11

Applegate Partnership

Region 6 (Oregon)

Primary Activity Type: Ecosystem Management

Bridge Types: Coalition Formation, Collaborative Problem-Solving, Dispute Resolution, Information-Sharing, Interagency Coordination, Joint Research/Fact-Finding, Resource-Sharing/Generation

Case Description

The idea for the Applegate Partnership was born in the minds of two unlikely collaborators, Jack Shipley, an avid environmentalist, and Jim Neal, the owner of an aerial forestry management company. Together these two men, frustrated with the polarization of resource management issues in their valley and not willing to accept deadlock, decided that it was worth a try to get the protagonists together and hash out some undercurrent issues face to face. The result, according to Shipley, has been a very successful community-based partnership.

In the summer of 1992, Jack Shipley and Jim Neal decided to begin discussing with others their idea of a "different approach to managing the half million acre Applegate watershed." Located in south central Oregon, the Applegate watershed includes Forest Service, Bureau of Land Management (BLM) and private lands. They wrote a short white paper outlining basic tenets of their plan, such as responsible extraction, no clearcuts and no pesticides. Shipley solicited comments from environmental groups and natural resource agencies (mainly the Forest Service and the BLM) and Neal similarly approached industry interests.

Surprisingly, what they found was that there was considerable overlap between the desires and interests of the environmental groups and the industry groups, centered around maintaining the long-term health of the watershed and stability of local economies. Encouraged by this apparent common ground, Shipley and Neal organized a meeting with representatives from industry, community groups, the BLM, the Forest Service, and several local environmental organizations to discuss a plan to make the Applegate watershed a demonstration site for ecologically and financially responsible resource management.

Not wasting any time, this 60-person group elected a nine-person board of directors, whose main job was to meet weekly to develop a vision statement for the group. According to Shipley, nominations to the board of directors was based not on affiliation, but on a willingness to "work toward solutions, leave partisanship at home, put ecosystem health in front of private agendas, and have the time to participate" in meetings. The vision statement for the Applegate Partnership reads:

The Applegate Partnership is a community-based project involving industry, conservation groups, natural resource agencies, and residents cooperating to encourage and facilitate the use of natural resource principles that promote ecosystem health and diversity.

Through community involvement and education, this partnership supports management of all land within the watershed in a manner that sustains natural resources and that will, in turn, contribute to economic and community stability within the Applegate Valley.

In addition to developing a vision statement, these nine people met secretly twice a week through the fall of 1992 and the spring of 1993, creating guiding philosophical principles. The purpose was, according to the partnership publication, *Applegate Partnership: Practice Trust -- Them is Us*, "making future land management in the Applegate Watershed ecologically credible, aesthetically acceptable, and economically viable." The decision to meet secretly was prompted by fear that either members of the press or politicians would, "misportray or use information in an inappropriate way," said Shipley. The members also hoped that secrecy would allow the fragile new coalition time to make mistakes and develop trust without being under the watchful eye of the media. According to the document mentioned above, the board of directors agreed that the partnership would:

- provide leadership in facilitating the use of natural resource principles that promote ecosystem health and natural diversity;
- work with public land managers, private landowners, and community members to promote projects which demonstrate ecologically sound management practices within the watershed;
- seek support for these projects through community involvement and education.

They also spent considerable time and energy working on developing trust and respect among the participants. "We were dealing here with arch enemies who in the past had only met across a courtroom," noted District Ranger Su Rolle. People were very afraid of hidden agendas and relinquishing any of their power. Jack Shipley believes all this work has been worth it. He feels that there has been a fundamental shift in attitude by people sitting on the board and comments that, "it was desperation and deadlock that brought us together, but it is trust and respect that keeps us going."

Some specific on-the-ground activities are taking the first steps toward achieving partnership goals and include plans for research and monitoring, environmental restoration, outreach and public education. Most importantly, however, is the plan to involve local communities in a visioning process of the Applegate watershed, whereby the partnership will encourage participation of individuals and agencies in developing a "desired future condition" for the watershed; a community image of what the area should look like and how it should function. Specific projects will then be judged by how well they respond to this community-developed goal of forest health and community economic stability.

Because of the mix of public and private land, some projects will be implemented through cooperation with private landowners, and some will be administered and carried out by the BLM and Forest Service. A cooperative assessment of the ecological and economic health of the watershed has begun involving both the BLM and the Forest Service, Oregon State University, The University of Oregon, Southern Oregon State College, The University of Washington and interested groups and individuals. A small but significant step toward cooperative management was made by merging the various GIS and other analytical systems between the Forest Service and the BLM with promises for continued combined research and analysis.

When the group went public in February 1993, it was immediately hailed as a success. Secretary of the Interior Babbitt visited the fledgling group in March 1993, soliciting ideas for the upcoming Forest Summit in areas such as implementation, ecosystem management and investing in community and economic infrastructure. The Summit itself referenced the group and asked two Applegate board members to participate in the summit proceedings.

Rolle believes that part of the success of this effort is attributable to Forest Service responsiveness to a visionary idea created outside the agency. BLM and Forest Service participants generally feel that the experience has helped them work more cooperatively and develop relationships of trust with outside interests. They are convinced that the partnership approach will result in more creative solutions to natural resource problems in the Applegate watershed, leading to improved environmental quality with more consistency and better follow through on projects. Local industry and environmental groups have faith in the process and are encouraged by the fact that the deadlock has been broken. The success of two small projects, a non-appealed timber sale and a USFS district-funded \$150,000 broad-based management program have only added to the positive feelings surrounding this partnership.

According to Rolle, "this is not a project in the sense that it has an end;" it is a process aimed at building relationships so that people and groups will be able to effectively participate in natural resource management decisions and projects. The group's hope is that eventually (in the vicinity of 5 years) the development and empowerment of informal local networks will make the formal partnership obsolete. This type of empowerment, as it is generally expressed by group members, would not only be beneficial in natural resource questions, but generate a broader feeling of empowerment for local communities. Members of the Applegate Partnership feel that their process is not just about the Northwest, nor is it just a timber issue; they believe it has broad implications for other issues and other areas of the world.

Why was this situation perceived as a success?

This partnership, regardless of its effectiveness at improving environmental and economic quality, can be called a success simply because it moved beyond people and issues and the deeply ingrained deadlock that had been so pervasive in the Applegate watershed. In place of this deadlock, positive relationships developed between polarized groups, agencies and the community; a common vision was attained. Arch enemies realized that they shared things in common.

Noteworthy changes in attitude have also occurred among the Forest Service participants. Success with this partnership has convinced many staff people that old ways of doing things are not as effective as they might have believed and that new approaches involving collaboration are needed. Rolle has noticed a change in attitude from staff believing they were "experts with a mission to convince," to a feeling of "lets see what we can do together." In so observing, Rolle was inspired to analyze and record some of the most visible paradigm shifts she observed such as control giving way to shared power and responsibility, public education evolving into a listening and learning together interaction, and a "we/they" orientation shifting to an "us" conception of the agency and community of interests surrounding it.

Why was success possible?

The strategic decision to avoid media and political involvement in the early stages of negotiation and decision-making appears to have facilitated the building of trust between parties. Recognizing that there had already been much misinformation and stereotyping involved in earlier conflicts, secrecy was encouraged to allow the new coalition space to

grow and develop relationships and trust without having to deal with the added pressure of media attention and politics.

The focus on people and interests, not on affiliation and positions also is believed by the participants to be a major factor in the success of the partnership. Rolle states that, "the partnership isn't as much about issues as it is about relationships." A lot of time was spent working on trust, with participants interacting as individuals not as representatives from a particular organization. Because there was no lead agency, all participants could participate as equals. Many of those involved felt that the relationship-building was the most significant aspect of the entire process. In fact, at the first meeting, and before they were allowed to indicate who they were and what organization they represented, participants introduced themselves and their families. This mode of introduction highlighted participants' common interests and bonds.

Keeping the project and scope locally focused helped facilitate agreement between diverse interests. Jim Neal stated that, "abstraction is death for partnership, but that once you can sit down and talk about a definable piece of land you can get beyond philosophy and things start to fall together -- you can agree on what is acceptable and what is not." Neal also believes that local environmental organizations are more useful groups to be involved in this sort of partnership than national organizations because they have a better understanding of local conditions and natural history. National environmental organizations, he fears, simply do not have the time to be involved in the planning stages -- local environmental organizations can be more interactive.

What barriers were faced and how were they overcome?

Learning to disagree and argue while maintaining a level of trust and respect was one of the greatest challenges the group faced. According to Dwain Cross, private logger and sawmill owner, while the group agreed upon the importance of maintaining trust, this emphasis was used by some as a tool to force private agendas by preventing others from expressing disagreement or anger. There was a point when any expression of anger was squelched by a comment such as, "you are just acting in a way that is no longer promoting trust." The problem was brought out into the open and the participants are more aware of the need to both develop trust and openly express opinions.

According to Shipley, national and regional environmental organizations were not as impressed with the process as one might have thought; "the big groups felt that such a partnership might be good for the environment in the specific case of the Applegate Watershed, they were not convinced that the model was one that should be broadly applied." Shipley's impression is that the national environmental organizations fear underrepresentation in some local areas, thereby undermining some national initiatives and leaving environmental quality up to local whims.

Issues of local control created concern for some Forest Service employees. Some staff were worried about losing control of decision-making on Forest Service lands and questioned the wisdom of opening up the process to this degree. To allay those fears, those staff were assured that all projects involving federal land would still go through regular agency channels. The decision-making authority of line officers was not being relinquished by this process. This realization created greater acceptance of the project within the Forest Service.

While the inter-group tensions and challenges were perceived by the group at the beginning of the process, it turned out that the biggest threat to the partnership would come

later because of the Federal Agency Committee Act (FACA). According to Rolle, FACA has really "thrown a wrench into partnership-building" through its strict regulations regarding interactions between public sector employees and their constituents. After two years of participation with the partnership, all federal employees involved in the Applegate were forced to withdraw from the board in late spring of 1994, fearing lawsuits under FACA. According to Rolle, the Applegate group still has a "clear mission and vision," but must proceed, at least for the moment, without the benefit of Forest Service or BLM guidance. Rolle felt that the whole situation "was a shame...that the BLM and Forest Service will no longer have the same kind of opportunity to access information from their publics...that something creative needs to be done about FACA...it was designed to assure balanced public/private interaction" and now appears to be preventing it. According to Rolle, this problem with FACA has been the "biggest thing to hit us in two years."

What lessons can be drawn for future bridging?

According to Jack Shipley, the major lesson that can be learned from the initial success of this partnership is that common ground does exist. In many issues, polarization and stereotyping tends to obscure what people and parties have in common. Participants need to look beyond disagreements and build upon what they have in common.

The second lesson to be learned here, particularly from an agency perspective is that there are advantages to shared leadership. District Ranger Rolle feels that more creative solutions are forthcoming from this process for on-the-ground management. Since she became a part of the process, she has integrated with the community: "we are now part of the system, a neighbor and we care...because of this we can expect greater follow through and ability to solicit community and volunteer aid."

Another lesson lies in the value of being open and responsive to ideas that are generated outside the agency. In this case, it was the ability of District Ranger Rolle to recognize and embrace a visionary idea and then find an appropriate role for the agency that helped foster the success.

An important lesson expressed by logger Dwain Cross; "you need to make sure that you give other people incentives to participate." In order for people to effectively work within a partnership such as Applegate, they need to feel as if their concerns are truly being listened to and considered seriously. Cross explains that due to the history of confrontation and the polarization of groups and issues, people tend to respond to their stereotypes rather than what people are really saying. This attitude puts a damper on meaningful discussion, making parties inaccessible to each other. Rather, Cross suggests that "we need to convince people of their importance so that they have incentives to participate."

An overriding lesson learned by all participants in the Applegate Partnership, agency and non-agency alike, is that by adopting broader perspectives about each other and about the realm of resource management possibilities that exist, exciting opportunities for both on-the-ground management and more productive interactions between groups will arise. In the words of a Northwest Forestry Association representative in the Applegate Partnership:

...the next step for us as far as the Applegate Partnership is getting out into the Applegate community and making connections on an informal basis with the interest groups that are in the community...these (interest groups) are communities essentially. (They are) communities of affiliation, communities of occupation, communities of interest, but they are distinct. They have their own decision-

making processes, they have their own leadership, they have their own geographical locations of preference. We need to link with those and understand their issues and we need to find ways in which they can begin to bring those interests into the process. We need to create substantive mechanisms, substantive opportunities to participate in ways that gradually build their skills and opportunities so that they can be equal participants. It is a ruse to say to somebody we want you to be an equal participant in this resource planning process when they don't know the terminology and they haven't had enough experience and they know it. If we really want them to participate, and I desperately do, we need to find those opportunities.

For further information:

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CASE STUDY #12

Negrito Ecosystem Project

Region 3 (New Mexico)

Primary Activity Type: Ecosystem Management

Bridge Types: Dispute Resolution, Coalition Formation, Joint Fact-Finding, Political Linkages, Public Involvement

Case Description

In rural southwestern New Mexico, the Reserve Ranger District of the Gila National Forest is no stranger to controversy. The District is located in infamous Catron County, the "national leader in the county rights movement," which district timber and recreation specialist, Gary McCaleb, refers to as a "small scale rebirth of the Sagebrush Rebellion." Fed up with federal government regulation, this county is in the process of bringing lawsuits against the U.S. Fish and Wildlife Service regarding the Mexican spotted owl and the Forest Service regarding its sensitive species list. It also has passed ordinances that threaten to arrest Forest Service personnel who make decisions "contrary to their custom and culture." The county has even written its own land use plan for the Gila National Forest, with which the county claims the Forest Service must comply. Resource management issues in this remote, rural county are exacerbated by the fact that most of its 2,500 residents are dependent on government timber and rangeland, and the local economy is in serious decline.

Despite this troubled context, the Reserve Ranger District is also the location of an infant but Congressionally-recognized ecosystem management initiative, known as the Negrito Ecosystem Project. A small conservation group, Friends of the Gila River, was interested in developing better ways to manage the riparian and range areas in the river's watershed and began working as volunteers towards these ends with District staff. When the Friends heard about the New Perspective Program's new ecosystem management focus, they became intrigued and proposed to the Forest Supervisor that the District apply the concept to the 130,000 acre Negrito watershed located at the headwaters of the Gila. With the Supervisor's agreement, the District embarked on the initiative.

A diverse but balanced coordinating group began meeting to develop and redefine the proposal. This core group includes Forest Service staff, Steve McDonald, President of Friends of the Gila and an independent biologist, a timber company representative, a county extension agent, and a grazing permittee. The group has met about 25 times since the project began two years ago and has done most of the "legwork and documentation" for the project, such as writing NEPA decision memos for small projects, and drafting budgets and project proposals. In addition to this core group, an informal working group of about 24 people from a variety of backgrounds and interests has participated in four or five all-day meetings over the past two years to help with developing the project's philosophy, scoping, expressing issues and concerns, and team building. Group participants serve as information "conduits" about the project to the organizations and people with whom they have relationships in the community.

A unique feature of the project is its commitment to a consensus approach on all decisions, including proposals for how money will be spent on the project. This approach was proposed by independent biologist and Quaker Steve McDonald who felt it was critical to achieving a sustainable and implementable project. The project also takes a holistic approach which recognizes that resource consumption is a valid use of the Forest, but that traditional management practices leave much room for improvement.

Source: J. Wondolleck and S. Yaffee. *Building Bridges Across Agency Boundaries: In Search of Excellence in the U.S. Forest Service* (School of Natural Resources and Environment, The University of Michigan, 1994).

Another environmental representative involved in the process commented that she hoped that the Negrito project would serve as "a model for a community that depends on resources for their livelihood." She emphasized the need for community level involvement and ownership in order to ensure on-the-ground success despite frequent Forest Service personnel transfers: "People [in the Forest Service] move through here so quickly. They are always in the planning stages; implementation is minimal...if the community is involved, they will provide the continuity that is necessary."

The project has not always run smoothly. Indeed, as described by McCaleb, it has proceeded over the last two years in "fits and starts" and with a "frustrating" lack of funding. Finally, last year it was one of two Forest Service projects that were specifically mentioned in Congressional appropriations to receive a portion of the monies earmarked for the new line item "ecosystem management." This special attention from Congress was the result of efforts by Senator Bingamon, who had met with the coordinating group about the Negrito project after personal lobbying by one of the conservationists involved with the project.

The result was that about \$2.2 million was given to the Regional Office in Albuquerque to be apportioned among the 10 Southwestern forests for ecosystem management activities. Project proponents were delighted with the decision to earmark \$96,000 of this fund specifically for the Negrito. McCaleb, the district point person for the Forest Service on the project, asserted that "with this funding the project is off and running." Much of the funding was used to support an extensive terrestrial ecosystem survey designed to set a baseline to assess future management activities.

Upon completion of the terrestrial ecosystem research, McCaleb says the group will be able to "transition from a general National Forest Management Act analysis to site specific plans." It is hoped that desired conditions and management guidelines for endangered species, timber and grasslands will be finalized by the end of summer 1994.

While the final verdict is still out on the ultimate success of the Negrito Ecosystem Project, the consensus approach it has taken and its commitment to holistically grappling with the huge task of managing a watershed on an ecosystem level appear to have strong support. Even within a local political context that is critical of non-traditional forest management practices, McCaleb said that the big spring meeting had a very strong and diverse turnout. While outside this pilot program, the debate over the appropriate use of National Forests rages, inside the process individuals from many different backgrounds are working together to try to manage a watershed in a manner consistent with overall ecosystem health and human needs.

Why was this situation perceived as a success?

The Negrito Ecosystem Project was one of the first Forest Service projects to embrace the New Perspective Program's ambiguous and ambitious goal of "ecosystem management." According to McCaleb, the reaction of some forests to the New Perspectives Program was to "rename all timber or grazing projects as New Perspectives projects." The Negrito project was different, however, by being a "holistic, ecologically-based ecosystem project" from its inception, not just a "retreaded traditional project."

Another keystone of the project, and one that has allowed it to function in the local economic climate, is the commitment of all working group members to socioeconomic issues, as well as ecological and biological ones. Participants are aware and concerned about the apparent correlation between the increases in unemployment as loggers lose their

jobs and alcoholism, spouse and child abuse in local communities. As a result, one of the focuses of the group is recognizing the links between environmental protection, resource use and the local economy, and preserving the rural character of the area. One of the participants plans to write up the project so it can be used as a "template" for other rural communities struggling with economic decline.

Lastly, in the current polarized climate of the region, the Negrito project is viewed as a positive step towards improving relationships between warring factions and providing a model for cooperation between federal, state and local interests throughout the region. District staff person Delbert Griego sees one of the major successes of the project thus far is the "...the interest shown by all participants and the relationships that have grown as a result of this."

Why was success possible?

One factor that promoted the project's initial success is what McCaleb refers to as an "almost miraculous combination of factors" supporting the initiative. In addition to the local environmentalists who generated the idea, there is support for the project from the major timber company in the area and the watershed's largest grazing permittee. The rancher has become an ardent and articulate proponent of the project's ecosystem management approach because, in McCaleb's words, "he is a conservationist. He's skewed towards commodity production, but he likes doing good things for the environment." Also, his house lies downstream and is subject to periodic flooding, and hence directly benefits from such activities as increasing the watershed's riparian vegetation.

The characteristics of the site itself have also helped promote the project. As a key tributary of the treasured Gila River, the Negrito watershed provides a well-defined and clearly visible target for an ecosystem management pilot project. According to District Ranger Mike Gardner, it was also very "significant" that although the area was subject to heavy recreation and grazing uses, there were no major timber sales or other conflicting uses planned in the watershed and no specific targets tied to the forest plan, which helped them avoid additional controversy in pursuing the project.

Additionally, the project's consensus approach has been essential to its success. In the words of McDonald, this unique approach is "pivotal" and will "make or break" the project. He explains it as "building from a common ground rather than from 'common cause' issue groups with their own agendas." The commitment to this process is illustrated by the Forest Service participants' willingness to hold group meetings to help set priorities and to develop proposals on how to apportion the money for the project. McDonald feels that this "equal partnership" on all issues, including the budget, is absolutely critical: "If any one group controls the process...the project will disintegrate into warring factions."

The support of the District Ranger for this consensus-based collaboration was a key factor encouraging a successful interaction. Although the Forest Service still retains the ultimate authority over how money will be spent, even allowing groups to play a role in the budget-shaping process is unusual. Says McCaleb, "Me being a bureaucrat, it blows me away...It's precedent setting...to see a district ranger give up authority is amazing." He attributes Gardner's willingness to be more open and flexible to "personal reason and professional realities...he's very much a people person, an absolute wizard at public relations. To survive a year here in this county as district ranger is a miracle." McCaleb also notes that the District was approaching a crisis situation that demanded an innovative approach, and that Gardner responded with foresight: "The planning wasn't working.

Projects weren't being implemented. We were walking into a meat grinder. He thought a different approach might work. It guarantees professional prominence and funding to jump on a national bandwagon [such as ecosystem management]. It sounded like ecosystem management would be a good thing to do."

District Ranger Gardner explains his approach: "I told them that the only bounds on the group is that their decisions can't adversely affect people who work on the District and they can't conflict with laws and resource directives from Congress. That kicked the door open and people came in..." Gardner recognizes that there are some potential hazards in this approach but feels it is a worthwhile trade-off. "I'm taking a little risk in allowing some authority to be shared in people helping us make decisions. But I'm cutting down the risk in implementing the decisions significantly...I won't have to fight to implement them."

McCaleb also gives credit to the incredibly motivated group of people on the outside of the Forest Service pushing the project. Explains the forester, "They basically said to the District, 'If you can't get your act together, we'll do it ourselves'."

What barriers were faced and how were they overcome?

Gardner admits that he had to overcome some barriers within himself regarding the unconventional consensus process used with the project. "It's not a traditional Forest Service process. I guarantee that. I had a lot of concerns at first. I've been in the Forest Service for 18 years and I've always had a real structured process for projects." But he soon realized, "If groups are willing to sit down and work things out between themselves, the Forest Service should be flexible enough to respond to them."

Gardner also had to get used to working with the group members in a more collaborative manner. "I was real uncomfortable with it at first. It involved the same people I would wrestle with in appeals, who would oppose our projects. I was a little untrusting at first. Just talking with and working with people, I feel comfortable with it now." He maintains that the process of overcoming these initial misgivings was facilitated by the fact that his Forest Supervisor provided him with "a lot" of support.

Although the Negrito Project was recognized early on as a good project by the Forest Service, participants were very frustrated by the lack of funding that accompanied this positive feedback, and the fact that earmarked funding often got siphoned off for other more traditional projects. They place much of the blame on Congress for micro-managing the agency in ways detrimental to innovation -- a feeling shared by participants both within and outside the Forest Service. Congressional appropriations are, says McCaleb, "still specific to disciplines, timber, grazing, etc. It was only this year that any money came down for ecosystem management...We need to start legally tying disciplines together."

The process was also time-consuming and "awkward and unwieldy" at times. "We had to spend a lot of time bringing people up to speed...We had to teach them everything the Forest Service has learned over the past 100 years." In addition, the consensus approach made progress "very slow and agonizing" which, McCaleb admits, was "frustrating to implementing-type bureaucrats like us" even though the District recognized its necessity.

Friction with the county has also been a small barrier to the project and McCaleb predicts it will be two to three years before there is a "clear legal understanding between the Forest Service and the county." McDonald maintains, however, that the project has not been unduly impeded by the county's nationwide anti-federal government reputation

because the project's diversity of interests is more representative of the county's composition than the vocal county rights interests which make the newspapers. He also holds that the Negrito initiative has overcome this polarization because its participants are not "approaching the problem in the traditionally adversarial mode."

The most recent stumbling block to the process of consensus building has been "a frantic scrambling to see if we might have violated the Federal Advisory Committee Act (FACA)," says McCaleb. There has been much discussion with the general counsel regarding meeting procedures and wording of the law. In general, participants in the group feel that FACA's definition of what constitutes an advisory committee is too narrow and there needs to be some mechanism for involving the local public that does not violate the law.

What lessons can be drawn for future bridging?

Those involved in the Negrito initiative recognized at the outset that, while the parties were diverse in backgrounds and interests, they shared a major underlying objective of seeing a healthy social and biological ecosystem in their community. When given the opportunity by the Forest Service to work towards this common goal, they readily recognized the benefit of setting aside their previously adversarial stances and began cooperating. The responsiveness of Forest Service employees to this outside idea and the key commitment of the District Ranger and Forest Supervisor began laying the foundation from which trust and communication among these groups could be built.

While collaborating in this fashion with diverse interests will be more time-consuming and expensive, McCaleb feels strongly that it is "the only thing that will stand the test of the time...you'll cover all the bases and it will actually get implemented." To respond otherwise to a situation such as the Negrito, he maintains, will result in appeals and lawsuits when it is all over.

In such a tense political climate, McCaleb stresses that it is also important to be sensitive to the variety of opinions and assumptions surrounding resource use on public lands. He describes this perspective as a belief that, "you don't steamroll anyone." In addition, he says, "it is important to have a small group of motivated people willing to do two main things: be creative and take a little flack."

McCaleb also feels that, in general, successful projects such as the Negrito Ecosystem initiative need to be "fed into the pipeline." McCaleb contends that, "there are a lot of pilot projects around...we need to crank some of them up and try them on a larger scale."

For further information:

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CASE STUDY #13

Yakima Resource Management Cooperative

Region 6 (Washington)

Primary Activity Type: Ecosystem Management

Bridge Types: Dispute Resolution, Information-Sharing, Interagency Coordination, Joint Research/ Fact-finding, Public Education, Public Involvement, Resource-Sharing/Generation

Case Description

The State of Washington is no stranger to conflict over resource use. One major controversy has centered around the appropriate allocation of fishing rights to various user groups and the protection of these fisheries from degradation caused by improper land management activities. This litigious conflict resulted in the Indian Fishing Rights Decision in 1976 which gave the 26 Indian nations in Washington the right to half of the salmon and steelhead in their natural fishing areas and prohibited federal and state agencies from impairing the health of the fisheries.

Highly controversial, this decision bounced in and out of the Ninth Circuit Court numerous times until the specter of continued litigation finally prompted the State and Indian nations to negotiate a solution to the conflict. The settlement came in the form of the non-binding 1987 Timber/Fish/Wildlife (T/F/W) Agreement which established forest policy for the state of Washington by revising the State Forestry Practices Act and establishing voluntary land management practices. The Agreement also called for an emphasis on basin-wide planning and established three pilot projects to implement this concept -- two on the west side of the Cascades and one on the east. Plagued by the cumulative impacts of heavy timber cutting and a morass of checkerboard land ownerships, the Yakima basin was selected as the eastern site to pilot a basin-wide planning project.

This situation provided the impetus for creation of the Yakima Resource Management Cooperative (YRMC) in 1989 -- "a cooperative, coordinated approach to forestland management." Considered a "process of self regulation," the Cooperative covers some 766,000 acres of public and private land in the upper Yakima Basin in Kittitas County, Washington.

Although not a party to the T/F/W Agreement, the Cle Elum Ranger District of the Wenatchee National Forest became involved in the YRMC because it is wholly encompassed within the boundaries of the managed area. Explains Bob Allen, Timber Management Assistant for the Cle Elum Ranger District: "We are involved because of the cumulative effects issue. We cannot ignore ANY activities in a given analysis area, such as a watershed, even though they may not occur on the land we manage. Conversely, our activities may affect other landowners...Also, with the emphasis on Ecosystem Management, this is an excellent arena to work with our neighbors in the development of landscape approaches to resource management." Other participants in the YRMC include the WA Department of Natural Resources, WA Department of Wildlife, WA Department of Ecology, WA Department of Fisheries, Yakima Indian Nation, Washington Environmental Council, National Audubon Society, WA Farm Forestry Association, Kittitas County, Central Washington University, and the two major timber operators in the area -- the Plum Creek Timber Company and Boise Cascade Corporation.

Source: J. Wondolleck and S. Yaffee. *Building Bridges Across Agency Boundaries: In Search of Excellence in the U.S. Forest Service* (School of Natural Resources and Environment, The University of Michigan, 1994).

The Cooperative established a policy group, composed of the "key managers" from the representative organizations. The group holds monthly meetings that are open to the public, followed by a closed "executive session." Operating under a consensus decision-making process, the policy group is led by two co-chairs which rotate every two years. In addition to the main policy group, there are numerous "technical committees" which, in the words of one participant, "do most of the work." These committees address such issues as fisheries and water quality, wildlife, a GIS database, cultural resources, landowners, budget concerns and public affairs.

The first order of business for the Cooperative was to develop a work plan. An 18-month endeavor, the work plan established six primary goals: 1) to identify resource conflicts and management opportunities; 2) coordinate data collection and assessment of cumulative impacts; 3) promote landowner flexibility; 4) meet the resource and use goals of the participants; and 5) work toward a long-term ecosystem approach. To achieve these goals, the YRMC established five parameters which serve as indicators of resource impact: snag density, sedimentation, percentage of early and late successional (old growth) habitat, pool riffle ratio and density of open roads. The technical committees then set thresholds for each parameter: "green light" (the desired level), "yellow light" (which means "getting to the point near exceeding the threshold") and "red light" (which means activities contributing to the undesired threshold level need to be suspended). The goal of the Cooperative is to move all substandard areas back into "green light status."

Most of the on-the-ground work of the Cooperative is accomplished through the technical committees. As Allen describes: "These groups...develop and implement workplans in various subwatersheds. They recommend priorities, develop inventory procedures, conduct analyses, and develop remedial action plans as needed to deal with areas where thresholds are, or are close to being exceeded. These priorities are approved by the Policy Group." In addition to ongoing work by the policy group and committees, each October all the participating landowners present their agenda of proposed activities for the upcoming year, such as timber sale programs, so all members can anticipate land management activities in the area and help proactively address cumulative impact concerns.

The idea, explains Allen, is to "try to head off problems before they get there." In some red light sub-basins, cutting has been curtailed until late successional growth reaches the minimum ten percent threshold level for old growth. Red light designation does not always require that all activities must stop, however, merely that they will be subject to greater scrutiny. For example, in one instance, the Plum Creek Timber Company wanted to undertake a timber harvesting operation in an area with red light status. The company presented to the group the specifics of its proposed activity and the mitigation measures which would be performed. Members of the technical committees visited the site and decided that the activity would not exacerbate the situation and the company went ahead.

To date, the YRMC has achieved many accomplishments. A remedial action plan was developed to address high sediment levels in two watersheds. A public education pamphlet for hunters and others emphasizing the theme of "Tread Lightly" was disseminated by all agencies. In addition, numerous jointly-funded projects have been conducted, including research on cavity nester use of snags and several sediment and spotted owl surveys. An archaeologist who was hired by the Yakima Indian Nation, also works part time on YRMC issues. Participants also share a common GIS database at Central Washington University which is used for data analysis.

With the help of a \$30,000 grant from the Northwest Area Foundation, the Cooperative has been able to hire a half-time staff person and begin two major research studies. The first study is aimed at determining requirements for Goshawks. The second is concerned with cataloging areas of cultural and archaeological significance, mostly human remains and plants with religious or medicinal uses. According to Marcy Golde, a representative for the Washington Environmental Council, receipt of this grant has been one of the biggest successes of the Cooperative. Prior to the grant, activities of the group were supported solely through contributions by members and some small Clean Water Act grants.

Although considered a success by many, some feel the Cooperative has yet to be seriously tested, as no participant has yet undertaken an activity in a yellow or red light area without the agreement of the appropriate technical committees. Says Marcy Golde in answer to whether the YRMC has been successful, "Cautiously, yes. I don't think we're there yet...We have a long way to go...."

The real test may be coming when the Cooperative must decide how it will react to the fact that part of the Yakima Basin overlaps with the Adaptive Management Areas outlined under the President's plan for management of the National Forests of the Pacific Northwest, commonly referred to as Option 9. Due to this development, the Cooperative might face the challenge of having to incorporate even more parties and a greater number of interests into their process, such as those with a wilderness or recreation focus. It is also unclear under Option 9 if the Forest Service will be allowed to interact with the Cooperative in the same way that they have thus far. Golde posed the question, "Will they be able to participate informally in open meetings, or will they have to run the show?" Golde was apprehensive about the possible challenges to the relationship that has taken so long to build, yet upbeat about its success because she says that, "the parties are in it for the long haul."

Why was this situation perceived as a success?

The Yakima Resource Management Cooperative has received accolades from many of its participants. Cle Elum District Ranger Catherine Stephenson, maintains that the Cooperative is "one of the most innovative intergroup interactions I've seen in my career." Claims Golde, "What we are doing is over and above the regulations and what would have otherwise occurred." Allen cites numerous benefits he feels have been gained via participation in the Cooperative: "More of a 'common front' approach to deal with increasing public use; more folks out there giving the same message to the public. A better opportunity to implement the concept of Ecosystem Management and to coordinate activities on a landscape basis." He adds, "Sharing information is probably one of the biggest benefits," particularly in helping to "make collective budgets go further." Of the three basin-wide planning pilot projects proposed by the T/F/W Agreement, the YRMC is considered to be by far the most successful. Golde maintains that the Yakima basin is one of the only places in the state working to protect wildlife and cultural resources and manage cumulative effects.

Participants also highlight improvements in relationships. Says Allen, "The trust level has grown. There is a lot more rapport between various players than when we started." Golde confirms this: "People at Plum Creek [Timber Company] tell me that there are major attitude shifts going on amongst the timber management people." Allen claims that this interaction has also helped non-agency groups who now "know who to contact" and feel "more comfortable with agency staff...If someone has a concern, they'll give me a call."

This increased trust between participants has also translated into fewer legal challenges. According to Allen, "We have very few appeals of timber sales on the District. I think it's partly due to being a part of this process. If people have concerns, they'll call us...The Forest Service is a lot more willing to hear as well." He adds: "If various participants didn't work together participating on cumulative effects then we would probably be in litigation...and a lot less would get done."

Perhaps most importantly, there have been on-the-ground changes in management practices by the participating landowners. According to Allen, the Plum Creek Timber Company used clearcutting as its preferred harvesting method five years ago but now has switched predominantly to selective cutting. The company has also invested considerable money into problem areas, such as roads with high sediment run-off. There have also been changes in Forest Service management activities that have been facilitated as a result of participation in the Cooperative. For example, the agency is planning to implement a new snag policy this spring, which restricts the cutting of snags for firewood. It has also participated in the rehabilitation of Cabin Creek, a stream prioritized for attention by the Cooperative. Additionally, some of the agency's research and monitoring dollars have gone to different places as a result of the YRMC's influence. Says Golde, "They're more consistent with what we're doing" so research is "compatible" and "assists" the YRMC.

Lastly, some of the YRMC's efforts are being used as a model elsewhere. In particular, the Cooperative's program has become "the basis for a statewide cumulative impacts program."

Why was success possible?

Participants feel that the key to the YRMC's success is the open communication approach used by the Cooperative which has helped in "building the trust levels between different views." Allen explains his own transformation: "I'm a Timber Management Assistant. I have a timber background. The YRMC has helped in breaking the barriers between timber and non-timber views. Timber isn't all bad; and if you're not a 'timber beast' it doesn't mean you want all timber to stop. It involves understanding each others' values...to look at the big picture and work towards an ecosystem approach, not just a particular issue area."

Others, such as Golde, also maintain that the individual personalities involved have made the YRMC work. In particular she gives credit to Dave Kirker, timber manager for the Plum Creek Timber Company, and his attitude towards timber management: "Kirker likes to work in consultative, cooperative agreements. I don't think he likes confrontation innately. Time and again he has kept Plum Creek at the table, making difficult decisions."

What barriers were faced and how were they overcome?

Golde aptly explains the biggest barrier faced by the Cooperative: "Basin planning with multiple owners is complex at best. Everyone has pretty different objectives." She adds, "It is agonizingly slow and difficult. If you've got a member who wants to stonewall, you can go around in circles forever. But you can do it. It ain't easy and it ain't cheap...It takes time...There's no free lunch."

The Cooperative usually works by consensus. However, in the Cooperative's 11-month grant-writing process, this approach proved to be too big of an obstacle to progress and was circumvented. Golde recalls: "We reached the end of the line on the grant proposal. We went around and around revising it. We did all the changes people asked for but they [one of the timber companies] still wouldn't sign on. So finally the Chair said we'll go forward without you." It's not clear what the ultimate impact of this will be and what the landowner will do if they come up against a threshold.

There is also different interpretations over how binding the Cooperative is. While many landowners stress the voluntary nature of participation, the environmentalists and Indian tribes feel that the participants have agreed to a more binding commitment. Explains Golde, "We say, 'Cooperative' not 'voluntary.' You gave us your word.' They say, 'It's voluntary and we don't have to.' But that's not what we thought or the tribes thought."

This situation is exacerbated by the fact that the T/F/W Agreement which initiated the Cooperative is, in Golde's words, "struggling." The region is "swamped with federal old-growth management conflicts" which involve many of the same players participating in the YRMC. Explains Golde, "It has made continued cooperation difficult when we were in conflict in a related and overlapping issue." Adds Allen, "Some environmentalists elect not to attend [the monthly policy group meetings]. They prefer to use other methods...Some people are impatient and feel we aren't moving fast enough." In order not to get mired in this controversy, the Cooperative "sidestepped" the spotted owl issue and instead set standards needed to maintain pine martens and goshawks, two other old-growth-dependent species.

In addition, as with many projects, the Cooperative is hindered by a lack of funding. Indeed, Forest Service staff feel it is the YRMC's "largest obstacle." To address this problem with funding, the Cooperative applied for and received a grant from the Northwest Area Foundation to assist in additional data collection and processing.

What lessons can be drawn for future bridging?

The Forest Service's involvement in the Yakima Resource Management Cooperative illustrates the difficulty of coordinating and reaching consensus among diverse interests and landowners. The resource base, land ownership pattern and relationships between the groups are all complex in this situation. At one level, taking steps to collaborate was a daunting undertaking, particularly given the history of conflict between the groups involved. Yet their efforts are paying off, both in terms of on-the-ground improvements in the resource and in terms of improved relationships and understanding between the parties. With perseverance, hard work and a commitment to working together, success can be realized even in situations of such complexity, and this reality is the major lesson to take from the efforts of the parties involved in the Yakima Cooperative.

In highly recommending that other Forests attempt basin-wide planning efforts similar to the YRMC, Allen offers this advice: "A lot of things states and landowners are working together to do are things the Forest Service has already done. I wanted to be careful not to give the impression that 'Hey, the Forest Service has been doing this for years -- the right way'." He said he was especially sensitive in working with other agencies not to exhibit a "feeling of arrogance," because many other agencies "don't have all the resources the Forest Service has." He adds, "Don't get into a position of superiority. We make mistakes too." Golde agrees that the Cooperative's approach could

be replicated in other Forests if there are "people who want it to work... You must have commitment and willingness to put in time and money."

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