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Conflicts in natural resources management: integrating social and ecological concerns

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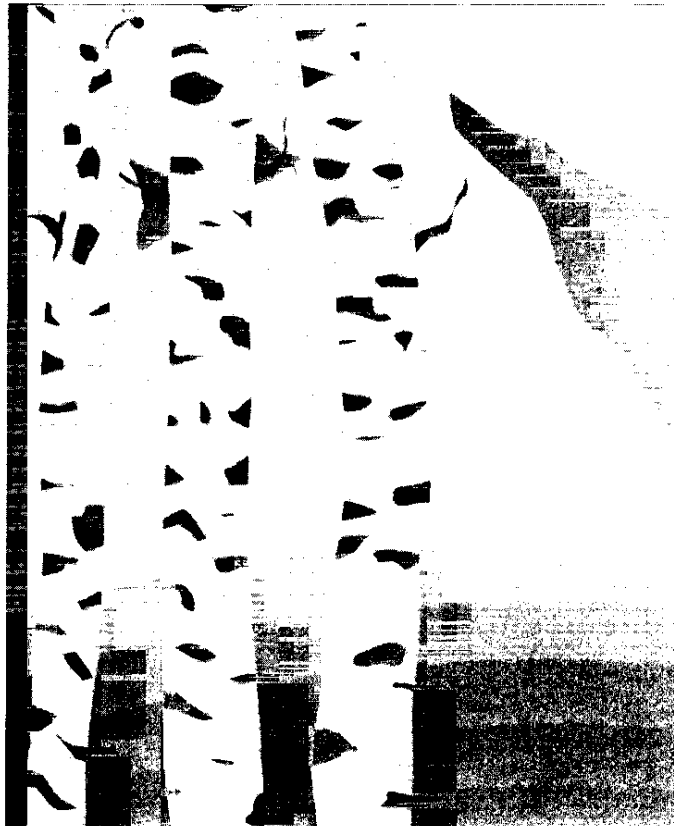
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Conflicts in Natural Resources Management

Integrating Social and Ecological Concerns



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Foreword

The College of Natural Resources recognizes the important role it has in educating natural resources managers and leaders who can provide the guidance and knowledge needed to increase the production of the earth's renewable resources while sustaining and enhancing the global environment and the natural resources base. The College's teaching, research, extension, and service efforts focus on the many aspects of sustained multiple-natural-resources management and their relationship to man. Through its many programs, the College of Natural Resources focuses on solving local, state, national, and global problems to enhance a more efficient and contemporary use of the world's natural resources.

Since 1930 the College of Natural Resources has offered several publications of various kinds to disseminate technical and popular information about natural resources and the environment. These publications have included *The Utah Juniper* (1930–1970), which started as a technical publication and evolved into a popular format and ultimately into the College's yearbook; *The Edge* (1978–1980), which was intended to be popular in format and highlighted faculty research efforts; and most recently, *Resource Lines* (1989–present), a newsletter about the College of Natural Resources and its programs, faculty, students, alumni, and friends.

The publication begun in 1993, *Natural Resources and Environmental Issues (NREI)*, is a technical series that addresses current topics relevant to natural resources and to the environment. The journal is published as a series of volumes, with at least one being issued each year as the proceedings of the Natural Resources Week symposium. Publication in *NREI* is by invitation only.

The management of global natural resources depends on our ability to obtain and disseminate pertinent information in a timely manner. Equally important, the information should reflect current issues of concern to natural resources and environmental managers as well as to the public. Through *NREI* the College of Natural Resources will provide information on timely topics of broad concern to professionals and to society as a whole.

Joseph A. Chapman, Dean
College of Natural Resources

Proceedings of the Symposium

Conflicts in Natural Resources Management

April 21–23, 1993
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Conflicts in Natural Resources Management: Integrating Social and Ecological Concerns

Edited by
Joanna Endter-Wada
and
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Logan, Utah

This volume is the result of the symposium held April 21–23 during College of Natural Resources Week, an annual event on the campus of Utah State University.

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Introduction

One of the greatest challenges for managing natural resources in the United States is the development of effective public policies and management strategies in the context of increasing conflicts. The growth and diversity of our population, fundamental economic and social restructurings, a plethora of new values and ideas, scientific advancements, the complexity of contemporary issues, and the pace of change have fueled conflicts over natural resources. These conflicts have brought us to many impasses. The urgency to address resource problems that have global implications and to sustainably manage the earth's natural systems makes it imperative that we find constructive ways to deal with these conflicts.

This volume is based upon a symposium which was organized to address the issue of conflicts in natural resources management. One guiding assumption of the symposium planning committee was that our failure to integrate social and ecological concerns lies at the heart of these conflicts. Another guiding assumption was that we are faced with the challenge of balancing these concerns in ways which are socially equitable, economically feasible, ecologically sustainable, and scientifically sound. The goals of the symposium were to provide frameworks and perspectives for understanding natural resources conflicts and to draw lessons from case studies of integrated resource management and of contemporary resource conflicts. An excellent set of speakers helped us accomplish these goals and, in addition to providing information and insights, gave the symposium participants vision, principles, and hope for dealing with seemingly intractable conflicts.

Several major themes are woven through these proceedings. The first is recognition that many traditional ways of dealing with natural resources conflicts have not been very successful. These processes often engender stereotyping, perpetuation of feuds, and political polarizations. The lack of correspondence between institutional structures for dealing with natural resources and ecological realities also has contributed to conflicts. These conditions have narrowed our thinking and discourse about natural resource problems and confined our approaches to solving them. In this context, conflicts have, at times, become ends in themselves and led to decision-making gridlock.

Searching for alternative ways to deal with natural resource conflicts was another major theme. Several speakers argued that this search should be based upon a moral and equitable approach as well as an informed and scientific approach to how we treat nature and how we treat each other. Basic principles should guide the search for alternatives rather than attempts to apply sophisticated sets of conflict management techniques. Creativity, innovation, flexibility, and competency are principles needed to address natural resource conflicts. Principles for dealing with each other include mutual respect, civility, dignity, honesty, trust, inclusiveness, equality, communication, patience, and understanding.

The examples and case studies offered by the speakers illustrate that conflict management approaches grounded in the history and context of particular places and responsive to the specifics of people, circumstances, and possibilities work the best. As Jeff Romm notes, we need "means to resolve problems on practical grounds in flexible ways for diverse conditions." Through such approaches, issues can be focused and defined, information can be discussed and evaluated, consequences and outcomes can be debated, common sense alternatives can be found, consensus can be formed, and productive change can

occur. Solutions arise from people sitting down together to work through difficult issues in an atmosphere conducive to cooperation. A place-focused perspective forces us to recognize the potential for creativity and opportunity in the midst of complexity and diversity. Charles Wilkinson sees hope in such approaches, arguing that if we seek the right resolutions to disputes for the time and place, then sustainability will merge with dispute resolution and will come “piece by piece, place by place.”

A third underlying theme of the proceedings is that human and ecological systems are inherently integrated. If our approach to managing natural resources takes this integration into account, we have a better chance of avoiding the externalities to which several authors refer, of finding feasible solutions to natural resource problems, and of sustaining the long-term health of both human and ecological systems. We also enhance our ability to fulfill the vision articulated by Wallace Stegner and referred to several times during the symposium of a “society to match the scenery.”

We thank the conference speakers and participants, who through their reflection and dialogue together sparked an excitement that characterized the symposium. Special appreciation is extended to the other members of the symposium planning committee whose spirit of commitment and collaboration helped inspire the hope that has resulted from this endeavor.

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Hope and Vision for a New West

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I am in the enviable position of setting the stage for today and, at the end of these two sessions, bringing down the curtain. That raises the question of strategy. Should I begin by pointing out the terrible challenges we face, and then end triumphantly, after the other speakers have solved them all? Or should I start out triumphant, in the certainty that the following speakers will bring us back to reality.

It is the question I face with *High Country News* every other week. Here, we need to position ourselves for a two-day conference about natural resource issues. Similarly, the staff of *High Country News*, which is now 23 years old, needs to do the same thing over a longer period of time.

Although I was trained as a scientist, I am no longer one. I am a publisher and journalist, running a paper that has 12,500 subscribers. To hold those subscribers, and to attract more, I need to tell them a story every other week that they want to hear, or believe that they need to hear. To tell a coherent story, fortnight after fortnight, I need to be planted in this place. I have to have the broad outlines of that story in my head.

I believe that you have the same need. I believe that policy work, scientific research, or economics, is done best when the researcher understands the society and how people fit into that society. Wallace Stegner talked once of "a society to match the scenery." I want to go out on a limb and talk about the individuals who would make up such a society and what values those individuals and their society as a whole might hold.

Our children are just starting out in the world, and I am getting to watch them repeat the struggles I experienced when I was young. Like me, they are torn by high expectations, adventurousness, fear, and hostility. They are also more and more curious about their parents, as they come understand what we went through while they were children—children who were wondering why they didn't have better and more attentive parents.

When they ask how I found a career—something

they are searching for—I tell them that I got into being an environmentalist because, on balance, I was a hostile, negative person, prone to believe that the world was going to hell, in large part because wrong-headed people were in charge. I was also more a second-guesser than a prime mover. I felt most comfortable explaining why something wasn't working, why it was working badly, or why it would *never* work.

As it happened, my role in the environmental movement was to publish *High Country News*. I have been doing that for a decade, as part of a mom-and-pop team, with mom the editor. We do it with a staff of ten or so, coordinating a freelance network of several hundred people, for 12,500 readers. *High Country News* is based in a little western Colorado town, and readers come through all the time, but mostly in the summer, to say hello and to see where their paper is published. They also send money, in addition to their subscription payments, so that the paper can get along without advertising. The paper is a non-profit corporation, governed by a twenty-person board from around the nation. It meets every four months in a different town, and every meeting is followed by a potluck for readers in that area. We just had one in Carson City that attracted 150 people from all over Nevada and eastern California.

Somehow, I—a negative, fault-finding loner—have become part of a wonderful community. It is a neighborhood community, where the neighborhood is the one-million square-mile West—especially its parks, wilderness, deserts. But increasingly, that community includes the West's working landscapes—irrigated fields, highway corridors, nuclear test sites, forests with roads.

The effect of this on me has been extraordinary. Although the job can be depressing—since part of *High Country News* job is to chronicle struggles to protect the West's last remaining natural places, and these fights are often lost—the wonder of the community of people who care about these places has changed me into a much more optimistic, can-do person.

As if this environmental community were not enough, two years ago I made several trips to eastern and central Oregon, to visit with ranchers in the Bend-Brothers-Burns-Steens Mountain area. The cumulative effect of those visits was to throw me into confusion. Until then, I had seen ranchers as basically one person. In theory, I knew they were individuals. But in practice, they were all the same: over six feet tall, even when they were shorter; Stetson-hatted; absolutely set in their ways; and somewhat overbearing. I also knew that as a group, they were doomed, due to their nineteenth-century values, which were inconsistent with the values I saw coming to dominate the West over the next few decades.

During those visits, however, I came to see several of the ranchers as individuals. Even worse, I came to see that we shared the same fundamental values. We differed on such things as abortion, national politics, and the war in Iraq. But we agreed about the really important thing—the West.

That discovery was profoundly unsettling. For one thing, it meant that my work as publisher of a crusading environmental newspaper would become more complex. More important, it meant that I had been blind in the past and I had seen a bland, homogeneous social landscape where there was a rich, diverse one.

These thoughts struck me most strongly on the road from Burns to the Boise airport; the first half of the trip was very painful. But about halfway to Boise, I rephrased the situation. I asked myself, *Why are you upset? You have discovered that the universe of people with whom you share common ground is larger than you thought. That is good news, not bad news.*

That rephrasing turned me into a consensus junky. Most recently, I have been searching for loggers with whom I share common ground, and I have found a few. After that, I'm going to look for miners.

This may strike you as a subjective, self-indulgent, even softheaded approach to Conflicts in Natural Resources Management. I would argue that it is very practical, very hardheaded. I would also argue that the best hope for the West is for all of us who care about the region to find our common ground.

We have already tried to divide the West, and that has not worked. We did that through division of the West into wilderness areas, parks, clearcuts, and mining districts. Zoning the West into the sacred and the profaned has not worked and will not work. We need to figure out how to create a region that is inherently and completely Western.

At the center of this West will be a community of people who love the region and who define themselves by their relation to this land. It will be composed of people whose highest values—right up there with family and God, and way above personal wealth—is their relation to the land and to other Westerners.

They will relate to the land and the landscape in various ways—they will hike or ski on it, fish its streams, herd animals across it, cut trees, dig ore, drive through it to sell insurance policies, guide tourists down its rivers, teach or write about it. But the key is that they want to, or need to, live here. Or, for us extreme cases, they will be people who cannot imagine living any place but in the West.

How will this West be defined? What will be the difference between the West and the Midwest, or the West and California? Many characteristics are on my list: clear air; small populations; easy access to rural places, even from cities; lots of small and diverse towns; and a place where the natural landscape overwhelms the man-made landscape. It will be a place where people, instead of competing with the natural landscape, try to have their work blend in with it. It will be a place where attempts to compete with the natural landscape—by building big office buildings or sprawling suburbs or huge houses—is seen as being in bad taste, or at least out of place. It also will be a place where nature remains a presence—where rocks may fall on the road or on your car, and one of the hazards of driving the region's main interstate highways will be that you may get hit by an avalanche.

Another major characteristic of the West will be a functioning ecosystem: watersheds work; forests are born, live, and die—either by fire or disease; and streams flow according to a natural seasonal rhythm. We will take our living from that ecosystem; we will rent the scenery to visitors by the day or by the week; we will cut some trees, we will harvest some grass; we will divert some water for lights and other modern necessities. We will not smash the ecosystem flat and then reshape it according to some industrial plan; we will work with it. We can build roads, but those roads can not erode for decades or cause the mountains above the road cut to slough away year after year. And we will accept the fact that our main task for the next century is to put as much of the West back together as we can, with the restoration plan being provided by the goal of naturally functioning ecosystems, rather than by plans to maximize water storage and electricity production.

What I am suggesting is a social compact among Westerners, based on a few core values having to do with the land and with the social environment. I see this as very hardheaded. There is no place in my West for those who want to re-create southern California. While I would not ban them, people who measure satisfaction by the size of their house and the number of internal combustion-driven machines they use would not dominate my West. There will also be no place there for people who move from region to region every few years, following economic currents created by corporations or bureaucracies. I do not

know if I would require that people be allowed to vote or own property only after having lived in a place for a year or two. But neither would I reject that possibility out of hand. Nor would I require a loyalty oath to the West, or a regional version of the Pledge of Allegiance, to be recited every morning in every Western classroom. But as best I could, I would create the kind of society that only those loyal to the West would choose to live in. Others could move here, but hopefully they would soon feel out of place and would move on.

These suggestions are intensely practical. People are moving to small western communities from major metropolitan areas, as I did in 1974, in search of the very values I have outlined above: clear air, natural surroundings, a less bruising society, and both order and freedom. But their very rush to achieve these things threatens to overwhelm the small places they have chosen to love, as well as the relatively large Western places, such as Tucson, Albuquerque, Flagstaff, Boise. The danger, some would say the certainty, is that the West will be overwhelmed and will become yet another homogeneous piece of America.

It may seem crazy and Utopian to oppose this suburbanization. Some would say that the only sane route is to become like the Custer buffs, the railroad buffs, or the modern mountain men, all of whom choose to live in the West's past, and to ignore its modern, prosaic present. It may be that the West is about to be submerged. But I do not think anyone can know that for sure. What we do know is that we live in incredibly interesting times—far more interesting, at least to me, than the initial settling of the West in the nineteenth century. As an example, look what has happened to the West despite the power of the Western senators and of the Bush administration. I would argue that, despite his best efforts, George Bush was the environmental president.

Look what happened on his watch. The Two Forks Dam in Colorado was defeated, despite the fact that Denver and its allies spent \$35 million to justify it, and despite the fact that no federal money was to be spent on it. Nuclear testing was ended and the nuclear labs stopped producing weapons, going into a cleanup mode. The Central Utah Project was redesigned as a smaller and more environmentally benign project. A start was not made on the Animas-La Plata water project in southern Colorado. The Central Valley Project was partially dewatered in order to help out the fish. The governor of Idaho (Idaho!) proposed drawing down the Snake River's reservoir in order to turn them back into rapidly flowing rivers. Glen Canyon, the dam that "tamed" the Colorado River through the Grand Canyon, was itself tamed. And throughout the Colorado River Basin, moves are underway to use dams to mimic the way rivers once flowed.

As I see it, enormous pillars that once held up the traditional West have fallen, and now we have a national administration that will allow change to proceed on a more level, and more rational, playing field. Now, I think, it is possible for us to decide what are the core characteristics of the West and to work to strengthen them. This effort will rest on work done by natural resources professionals, especially those at the land-grant universities, whose charters make them the intellectual centers of work on natural resources.

My hope is that the land-grant universities will help the West create a new economy based on restoration. In particular, we need to high-grade restoration. High grading has a long history in the West, consisting of mining the richest ores, cutting the biggest trees, shooting the buffalo en masse, damming the rivers for their electricity while disregarding the rest of the rivers' properties, and so on. High grading consisted of maximizing short-term gain with minimum investment.

My suggestion is that we now restore the West by performing the easiest, cheapest restoration first. This is possible because we have done so much destruction for so little gain. We have already started doing that restoration in some areas. The campaign to remove Elwha Dam on Washington's Olympic Peninsula is based on the fact that that dam destroyed a valuable fishery to produce a dab of electricity. Elwha is just a start; the Oregon Natural Resources Council has picked out a dozen similar dams that are either unused or produce very few benefits even as they damage stretches of rivers.

On a broader scale, the move to restore riparian areas has energized large portions of the West. Riparian areas were often badly damaged or destroyed for a relative pittance of grass. Better management or outright protection would allow many gullies to be transformed back into functioning streams, with all the natural wealth that this implies. The potential for nonriparian grasslands is also huge. Overgrazing and the suppression of fire have damaged many grasslands and watersheds. We have just begun to turn our attention to the restoration of forests, and the fight over how that restoration is to be done will occupy at least the present decade.

On balance, I think the restoration of streams and grasslands will go much faster because part of the equation, the ranching communities, are much healthier communities than others, like the logging or mining communities. And the health of the land depends on the health of the human land-based communities.

Let me end by discussing what happened in Colorado in the fight over whether or not to build the Two Forks Dam and reservoir in the mid to late 1980s, a dam which would have served the expanding Den-

ver metropolitan area.

In my opinion, the uniqueness of the fight was the decision by the environmental community to provide information, rather than to take the usual stance of saying, "You can't flood this canyon," or "This growth will destroy us."

The environmentalists built a computer model of the Denver Water System. Denver had such a model, but they would not share it with their 50 or so suburban partners on the project, or with the people doing the \$35 million Environmental Impact Statement. As a result of the environmentalists' ability to build a model on a PC, and as a result of their general determination to provide dependable information, environmentalists gained legitimacy in the process as they never had before.

Their actions assured both the public and federal decision makers that the Denver area could continue to grow without building the Two Forks Dam. People who testified at public hearings in Denver and its suburbs, and in the rural areas that Two Forks Dam would have helped dewater, were overwhelmingly opposed to the project. In some places, so many people turned out early to sign up to speak against the project that the handful of proponents never even got on the agendas. That outpouring of public sentiment made it possible for the decision makers to veto the project.

But my point isn't Two Forks itself. I want to remind you of what people once said about the Soviet Union. They said that the Soviet Union could never modernize because if it did and if people had free access to copy machines, modems, personal computers and the like, then they would also have access to information and be able to communicate with each other—which would doom the Communist regime.

I suggest that the same thing is true of the rural inland West. Our access to modern communication and information enables environmentalists and other critics to compete on equal ground with bureaucracies that in the past could propose a project, produce supporting data, and claim that only their project would work. Today, as the Two Forks Dam case shows, critics can match groups such as the Denver Water Department in producing reliable data and in communicating their findings to an interested community.

I end with this example because it illustrates that a healthy environment depends on a healthy human community. If we did not have a certain amount of freedom in the West, as well as the information and data-analyzing ability we need to make decisions, Two Forks Dam could not have been defeated, and our Western environment would be in a little worse shape. The Two Forks Dam case illustrates how we can bring into existence Wallace Stegner's wonderful vision of a society to match the scenery.

People, Places, and Resolving Disputes: Lessons from the Colorado Plateau

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Abstract

Complex historical and contemporary forces operating in the American West are examined to explain the region's contentiousness and why traditional forms of decision making have become strained. Several efforts at dispute resolution on the Colorado Plateau offer lessons about making policy and resolving disputes in accordance with the demands and opportunities of different places and circumstances. The dispute-resolution cases explored involve the Central Utah Project and Glen Canyon Dam, the Grand Canyon Visibility Transport Commission, the Anasazi Heritage Center, the 6-6 process in Arizona, the Colorado Roundtable, and the Navajo Nation Peacemaker Court.

THE CONTEXT FOR DISPUTE RESOLUTION IN THE MODERN WEST

Throughout our nation, over roughly the past two decades, legislators, administrators, political scientists, lawyers, judges, anthropologists, and all manner of private citizens have given increasing attention to new methods for resolving the controversies, small and large, that shackle our decision-making processes. A significant part of the problem is due to the vastly increased size and complexity of our national society. When our first census was taken in 1790, the new nation held 3.9 million people. Today, my home state of Colorado accounts for nearly that many and our country's total population is seventy-five times larger than that first census figure. In the United States, especially in the West, cities have mushroomed into metropolises and, in many cases, megalopolises. Our body politic has grown in other ways. The nation has opened the ballot box, the whole democratic process, to women, African Americans, Native Americans, and other minority groups.

The population growth and the technological, economic, and social changes have brought much good, but our traditional forms of governance have been

strained to the breaking point by these complex systemic changes. When our nation was formed, our national Congress was a collegial working body of twenty-six senators and sixty-four representatives representing a small geographic area along the Atlantic coast. Tight-knit societies could still make consensus decisions in, for example, New England town meetings and traditional tribal forums facilitated by tribal religious leaders or elders. Today, the scale is of a wholly different magnitude, and we are searching for new institutions and new processes.

There have been two great movements to attempt to deal with this burgeoning size and complexity. The first involved the rise of administrative agencies. This development is somewhat more recent than commonly realized. Although the Interstate Commerce Commission was established in 1887, the real beginnings of the modern federal bureaucracy trace to the New Deal in 1933. Large federal agencies were an explicit recognition that Congress could no longer do all of the lawmaking; these new offices were designed as "little legislatures," with a significant degree of authority to make laws and otherwise resolve disputes. The state administrative agencies developed more slowly than those at the federal level, but the basic series of developments was the same, as state legislatures could no longer handle the entire legislative workload.

The second experiment with dispute resolution involved the judiciary. From the beginning, we have had three branches of government, but for most of

This talk was dedicated to the living memory of Wallace Stegner, the novelist, historian, and essayist who the author thinks was the greatest intellectual influence on the American West during the twentieth century. Wallace Stegner died nine days before this address was given.

their existence the main job of federal and state courts was to resolve private, two-party lawsuits. Quite recently, in 1954, the United States Supreme Court handed down *Brown v. Board of Education* and the judiciary took on school desegregation, perhaps the largest public issue facing the nation. In rapid order, access by African Americans to other public facilities, equal treatment for women and many other dispossessed groups, environmental and natural resource issues, and numerous other front-line matters of public concern became issues that would be resolved in significant part in the courts. Today, Congress regularly leaves key phrases in statutes ambiguous, knowing that they will ultimately be resolved in administrative agencies or in the courts.

Now, of course, the new administrative agencies and courts have themselves been swallowed up by the scale of societal problems. Administrative processes have too often become inflexible, highly formal, and interminable. As for the judiciary, the public has a high degree of respect for the quality of our judges—if you have a great deal of time and even more money, so that you can finally get to one. Justice delayed, or justice too dear, is justice denied. Needless to say, legislatures, administrative agencies, and the courts will always be important forums for resolving disputes, but in the past few years the search for alternatives has intensified.

ROOTS OF CONTENTIOUSNESS

The contentiousness is especially acute in the American West, particularly with respect to the lands and waters of the region, and it is worthwhile to pause and examine why this is so.

The first cause is intangible, the rootlessness written of so vocatively by Wallace Stegner. In book after book, perhaps most notably in *Big Rock Candy Mountain* (set in important part here in Utah) and in *Angle of Repose*, Stegner showed how westerners have always been on the move. He rightly tied this to the often harsh land and aridity. Many people just could not, or were not willing to, make it through a long dry year when the streams refused to offer enough irrigation water to make the crops sprout. Ever since James Marshall's find in California in 1848, the economy of the region has been closely tied to its natural resources. As Stegner and others have shown, this led to a lurching economy, with mining and timber companies striking it rich, playing out the find or the stand, and then moving on. Given this, how could the West do much in the way of building the close-knit community fabric that is best for resolving disputes?

It was because of the stable communities, the fact that they were "stickers," as he called them, that Stegner so admired the Mormons, as set out in his book, *Mormon Country*, and in other writings. I'm sure Wally would have chuckled approvingly if he had been told of Eliza Redd, the grandmother of rancher Hardy Redd of La Sal, who settled in Bluff in the 1880s and wrote in her diary, "Who goes through life without a little hardship? We came here to learn, not to suck a silver spoon." But Eliza Redd, and the Mormon communities she and others helped settle and nurture, were the rare exceptions. Historically, westerners have been good at many things, but most of them were done on the move and it cost the towns and cities of the region dearly.

The second reason for the high level of contentiousness in the West involves one of the region's great legacies, the federal public lands. As you know, the public lands comprise 50 percent of all acreage in the eleven western states and the percentage is higher yet in the Intermountain West. Two-thirds of Utah is owned by the United States, held in trust for all of the people.

Yet these magnificent assets, like the admission of dispossessed people into the political arena, have, ironically, increased the level of disputatiousness. The root cause is simple. A private landowner has extensive discretion over his or her land. To be sure, disputes can arise, but the sway of the owner to make a final decision is very broad. On the public's landed estate, however, the situation is very different. We all have a say and we regularly say it. Who could even begin to count all of the controversies now underway in federal and state legislatures, administrative agencies, and courts, and in the media on a day-to-day basis, over the public lands in Utah alone? What a blessing the public lands are. But we get angry when our blessings are infringed upon and, since the kinds of blessings from the public lands are different things to different people, we are in an almost constant state of anger over these wondrous lands.

The third reason that we in the West face a disproportionately large number of disputes traces to distinctive historical forces at work in this region. A person looks at these kinds of concepts in different ways at different times in their lives, but at this moment I think of the history of the American West—or at least its history since the arrival of non-Indians—as having three main eras.

HISTORICAL ERAS OF THE AMERICAN WEST

The first era began with the California Gold Rush in the late 1840s and early 1850s. People poured into the West, not just from the East Coast, but from all around the world. Gold seemed limitless and so did the water that the miners used to blast the gold loose

from the hillsides. When farmers began to arrive, spurred on by the great Homestead Act of 1862, the rivers still seemed limitless and so did the potential farmland. After the Civil War, the great cattle drives brought domestic stock by the millions to the public grazing land, which, too, seemed without end. After the logging companies mined out the pine stands in the Great Lakes and moved to the Rockies and the Pacific Northwest in the 1890s, the western forests also seemed abundant.

A distinctive body of policy and law—I have come to call them the “lords of yesterday”—grew up in the West under these nineteenth-century circumstances and perceptions. The lords of yesterday were based on an extraordinary combination of two ideas: that public resources should be made available for private gain free or at far below market value; and that the government, in addition to these initial subsidies, should further fuel the development by affirmatively building water projects and other public works to support the opening of the West. It was, in all likelihood, the greatest program of subsidies ever undertaken by any nation, and it surely paved the way for its intended purpose, to open the West for settlement by non-Indians. These lords of yesterday include the Hard Rock Mining Law of 1872; the dedication of the public range land to below-cost, unregulated grazing; the dedication of the public’s forests to logging, often through below-cost sales, as the predominant use of the public’s forests; the dedication of the rivers of the Pacific Northwest to irrigation and hydropower development at the expense of the salmon and steelhead runs; the many different policies underlying the prior appropriation doctrine of water and the reclamation program; and, as the overarching philosophical idea, the notion that growth should be promoted at every turn. What a time; the world had never seen the likes of it.

The second era in the history of the West began after World War II, when the lords of yesterday rose to their glory. It has been during this short period of time, which began just two generations ago, that so much of the development in the region has taken place. The beginning point is best set at the completion of Hoover Dam on the lower Colorado River, just southeast of Las Vegas. This launching pad for the modern industrial West was impressive by more than western standards. At 726 feet—as tall as a seventy-story office building—Hoover was the world’s highest dam. The project used enough concrete to build a five-foot wide, four-inch thick path from the North Pole to the South Pole. The reservoir behind the dam stores 28 million acre feet of water, twice the annual flow of the Colorado River.

Then came the big build-up of the Colorado Plateau, meeting water and energy demands over a thousand-mile grid from the Pacific to the Pecos, a build-

up highlighted by the completion of Glen Canyon Dam in the 1960s. It was during this period of just two generations—a blink of time—that we overran the whole West, building up the metropolises, clogging the airshed in each of them; damming the Columbia River and reducing the magnificent fish runs to just 10 percent of their historic level; slashing away at the old growth forests of the green Northwest; and overrunning public land systems from Mesa Verde to Yellowstone and from the Olympic to the Black Hills.

To be sure, the great build-up accomplished some worthy objectives. Farmland has been watered and some farm communities have been strengthened. The cities have water. Electricity is spread out to millions of homes, businesses, and hospitals. But now we find increasing numbers of people asking questions: Was such an absolute conquest necessary? Did the cities conserve first and then ask for water and energy? Did we care enough for the water, the land, and the air? And did we care enough for the people, especially the Native American peoples of the interior West, on whose backs the build-up was accomplished?

The third era began just recently as those questions, and others like them, began to be asked in many different quarters and as we began the serious business of finding ways to answer them.

I believe that years from now, people will look back to the late 1980s and early 1990s as a time when our society began, in a concerted way, to make its stand about this earth and its creatures. By about the mid-1980s, new data reached the public consciousness—data about global warming, ozone layer depletion, and rain forest destruction. In the American West, endangered species catapulted into public view in an unprecedented way. I think of the sharpest defining moment as being the Forest Service’s 1986 draft EIS on the spotted owl. It generated the most comments of any Forest Service EIS ever released. Then, in 1989, the salmon runs plummeted with the low water in the Columbia River. This occurred in the lush Pacific Northwest, our most environmentally sensitive region. Then the Rio Conference further galvanized opinion and concern.

The urgency of these and other data led to, or was accompanied by, an unprecedented explosion of ideas. Sustainability, ecosystem management, adaptive management, the new resource economics, biodiversity, environmental ethics—none of these terms were part of the public discourse until just a few years ago. Of course, each of these ideas is still vague—and I will address that issue later—but already we’re starting to put them into practice on the ground.

The importance of these events is heightened by the new administration, but not in the narrow sense that a new political party has moved into power in

Washington or that serious proposals to revamp many of the traditional laws and policies dominate the stage on Capitol Hill. Rather, the most profound change is coming up from the ground, from western communities, from young people in the local, state, tribal, and federal agencies. In staff offices all across the West, in the parks, the forests, the refuges, even on the public-domain lands, there are growing numbers of young people imbued with bold ideas that are just a few years old. The people who were at the top, burdened by ideas that had once fit an earlier and different time, had kept the lid on these ideas. Ultimately, people like Bruce Babbitt, Al Gore, and George Miller, visionary though they may be, will be facilitators who will allow and encourage new ideas and energy to germinate and rise up from the ground.

So I think it is an objective reading of powerful historical and contemporary forces, not a lack of historical perspective, that causes us to recognize the importance of this time. The "lords of yesterday" were created in the nineteenth century and spun out of control after World War II, and now it is our job to reconcile those old ideas with a dramatically different modern consensus about how to treat our lands and waters. A sea change such as this means that we will have disputes of many kinds at all levels, and it underscores the imperative necessity of resolving as many of them as we can in an open, fair, and expeditious manner. Obviously, that will not be easy, but it is the central charge of our time.

RESOLVING DISPUTES: LESSONS FROM THE COLORADO PLATEAU

Rather than talking about dispute resolution in the abstract, let me offer several examples of dispute resolution on the Colorado Plateau. Those efforts, some generally successful, some still in progress, may provide us some lessons about what works and what does not.

THE CENTRAL UTAH PROJECT AND GLEN CANYON DAM

In October of 1992, Congress passed the scintillatingly entitled Reclamation Projects Authorization and Adjustment Act of 1992, commonly referred to as the "1992 Omnibus Water Bill." Two of the titles in the act dealt directly with the Colorado Plateau. The first addresses the Central Utah Project (CUP), scaling it back, adopting provisions to protect fish and wildlife, and attempting to fulfill treaty promises made to the Northern Ute Tribe of Utah. The second, the Grand Canyon Protection Act, provided for modifications of the flow regime at Glen Canyon Dam, traditionally operated to meet the

needs of hydroelectric development; the objectives of this legislation were to protect the natural environment, including the stream banks, to protect cultural resources, and to enhance recreational use.

We can make these observations about the 1992 Omnibus Water Bill in general, and specifically about the two provisions just mentioned, with respect to dispute resolution. First, the 1992 act looks like a federal law, but in many ways it is not. Both the CUP and Glen Canyon provisions are best understood as local (that is, state, tribal, municipal, and citizen) initiatives that were manifested in locally negotiated agreements and subsequently ratified by Congress. Indeed, this description fits most of the 1992 Water Act—it is not really a single act but rather fifty separate titles, most of which were negotiated at the local level.

My guess is that we are going to see a great deal more of this. To be sure, there are some issues with national or western reach that Congress will have to treat through legislation—for example, strengthening of the Endangered Species Act, reduction of the timber harvest in the national forest system, and substantial modification of the 1872 Hard Rock Mining Act. In most cases, however, accords will be reached at the local level. Congress may become involved, but federal legislation affecting the West will tend to be the implementation of legislation in which a particular controversy, resolved at the local level, needs congressional action either because it involves public lands, Native American issues, interstate conflicts, or a federal project, or because federal funding is necessary. Thus these two major pieces of water legislation reflect the wisdom that the best solutions can be made locally, with all of the interested parties, including the public and Native American tribes, at the table.

Second, both titles, like most of the other provisions in the 1992 Omnibus Water Bill, placed a high priority on the natural values of our rivers. Reclamation projects for irrigation and hydropower projects for energy production accomplished a great deal of good, but they went too far. Nearly all resolutions of disputes over water in the future can be expected to reduce the dominance of reclamation and hydropower on our rivers and to give more sway to the diverse benefits that a natural watercourse can give.

Third, the CUP and Glen Canyon settlements relied heavily on conservation—of water with respect to CUP, and of energy with respect to Glen Canyon. We can expect this to continue in resource settlements all across the West. Often, conservation can reduce a significant part of the demand now met by existing projects and can obviate the need for new projects. We are beginning to see the benefits of water conservation both on the irrigation fields and in the cities. In the area of energy, we have only scratched the

surface of the potential in conservation: Leading authorities, including the Electric Power Research Institute, show that we can meet one-third to one-half of all new power demands by energy conservation at a savings of billions of dollars per year. What we have gradually begun to learn is that many of the big irrigation and hydro dams were unnecessary in light of contemporary knowledge of conservation, and the same is true with many of the coal mines and coal-fired power plants. Conservation will be a powerful and positive factor in dispute resolution in the future.

Finally, the CUP settlement dealt with Native American rights, as was the case with many other titles in the 1992 Omnibus Act. In this instance, the legislation involved the Northern Utes, who once held one of the largest and richest of all Native American reservations: a treaty-guaranteed estate that covered most of the Western Slope of Colorado, running from the New Mexico border to nearly the Wyoming line. Twelve million acres of treaty land—one-fifth of the whole state of Colorado—were torn away from the Utes in the 1870s to satisfy a gold rush. Then in 1965, the tribe entered into an inequitable agreement, the "Ute Deferral Agreement," that sharply circumscribed any use of Ute water rights, the oldest and largest in the Duchesne River Basin. The 1992 legislation brought some long-delayed justice to the Utes. The need to resolve litigation with tribes and to honor long-ago promises will drive many more agreements over western water and other resources.

THE GRAND CANYON VISIBILITY TRANSPORT COMMISSION

In the 1990 Clean Air Act Amendments, Congress provided for a Grand Canyon Visibility Transport Commission. The Commission is now at work and is composed of representatives from eight states—the Four Corner states along with Wyoming, Nevada, Oregon, and California. The job of the Commission, after an open fact-finding and hearing process, is to make recommendations to the EPA administrator concerning the remedying of adverse impacts on visibility in the Grand Canyon caused by current or projected air pollutants. The idea is that EPA will ratify the Commission's work and that the result will be a "negotiated rulemaking" rather than unilateral federal action.

Jim Souby, Director of the Western Governors Association, which staffs the Commission, reports that he is "stunned at the cooperative nature" of the participants on the Commission. He cites the fact that the Environmental Defense Fund and Phelps Dodge have joined together to push for more funding for research. One critical area of future research involves a "clean air corridor" that seems to be created by a flow of clean air pushing down from Oregon to the

Grand Canyon. Future energy development in Oregon could diminish the effectiveness of that clean air corridor.

The work of the Grand Canyon Visibility Transport Commission is still in the beginning stages, and it is too early to draw conclusions as to its effectiveness. We can, however, make these observations about this important institution. First, the idea of creating such a Commission is inventiveness at its best and dispute resolution will constantly require creativity—new approaches created by the affected parties. In this case, a body created and funded by Congress, but constituted by the western states, is charged, in the first instance at least, with protecting a resource treasured locally, nationally, and internationally. In some respects, the Commission is similar to the rule of the Northwest Power Planning Council, also federally created but state-constituted, in the Columbia River watershed. But the Commission is not identical to the Northwest Power Planning Council, a reminder that all dispute resolution efforts should be informed of existing models but not slavish to them.

Second, the Commission underscores the importance of attempting to develop data upon which all of the sides can agree, as opposed to the classic litigation model of advocates from each side presenting data skewed toward their own interests. If, for example, the participants can agree on most of the evidence concerning the clean air corridor from Oregon, then they are many steps down the road toward resolution.

Last, the Commission will become deeply involved in conservation issues. If it accepts and implements the idea that future pollution-causing development can be avoided through conservation and the use of renewable resources such as solar and wind energy, then it will have moved energy policy forward by creating a working example of sustainability—sustainability of the sacred vistas of the Canyon Country.

THE ANASAZI HERITAGE CENTER

Another example of dispute resolution from the Colorado Plateau involves the creation of the Anasazi Heritage Center. The Dolores River runs through the Montezuma Valley, north of Cortez in southwestern Colorado. The McPhee Dam Reservoir on the Dolores was one of the last major reclamation projects. Authorized by Congress in 1968, construction of McPhee Dam began in 1977 and was completed in 1984.

The Montezuma Valley was home to the Anasazi. They left much behind and, given the substantiality of their communities, it is logical that they would: At the height of their occupation, between 1000 and 1300 A.D., the Anasazi population of the area was at least twice that of the current population. A large village

site was found by a Spanish expedition in 1776 and was named after one of the Franciscan priests who headed up the expedition, Father Escalante. A smaller village, named after Father Dominguez, was discovered during this century.

One can well wonder whether yet another reclamation project, heavily subsidized but still expensive for the farmers receiving project water, was necessary on the Dolores River in the 1970s. But that was at the end of the reclamation era, not after it; no one asked the hard questions, and the valley was inundated. In 1975 and 1976, the Escalante ruin was excavated and moved to a nearby hill with a 360-degree view of this piñon-juniper and valley country. The Dominguez ruin and many other relics were also removed.

There was local support for the McPhee Dam and Reservoir, but there was also support for the Anasazi. A settlement emerged that provided not only for the salvage and relocation of the Escalante village, but also for the creation of the Anasazi Heritage Center, administered by the Bureau of Land Management. The Center is a wonderful institution, a valuable resource for the understanding of the Anasazi culture. The Bureau of Land Management has even put together a video, "Mystery of the Cliffs," in which the Teenage Mutant Ninja Turtles, no less, were recruited to star in an episode in which they protect Anasazi pots, rock art, and a village from vandals. Don't underestimate this video's drawing power.

One of the most pressing areas of dispute on the Colorado Plateau is over archaeological sites. I've never felt so close to the profound as when I've discovered Kokopelli figures up a remote, rocky draw; or looked across a small side canyon of Comb Ridge to find "Eagle House," as we called it, perched on a seemingly inaccessible ledge on the canyon's far wall; or when I heard my ten year old, Dave, exclaim, "Dad, a corn cob from a thousand years ago!"

I don't believe in salvage archaeology. I think you lose the profundity when you uproot a site and move it. Still, the creation of the Anasazi Heritage Center strikes me as the right resolution of that dispute for its time and place. Perhaps the Anasazi Heritage Center will be a force in helping us develop a national policy in which we, like Finland, Sweden, Germany, and other nations, consider archaeological sites inviolate. Perhaps, just perhaps, the Anasazi Heritage Center, bred of salvage archaeology, will help us move to a point where we no longer resort to salvage archaeology.

Still, the episode of McPhee Dam and Reservoir underscores how critical it is to have all parties at the table. During the first and second eras in the history of the West, the only parties at the table were the developers and the boosters. McPhee Dam reminds us that the Anasazi should have been repre-

sented, too. We need, and perhaps some idealistic young people will help establish, an Anasazi Defense Fund to represent all of the Old People and all that they left behind. The Anasazi need a firm of lawyers, archaeologists, anthropologists, economists, and lobbyists to fight the many battles ahead in the legislatures, courts, and administrative agencies. There is also a larger need to shape public opinion so that a consensus in favor of the Old People will develop. Dispute resolution cannot work unless everyone is represented, and we will not have done right by the Anasazi until they are at the table, too.

6-6 PROCESS IN ARIZONA AND THE COLORADO ROUNDTABLE

A fourth area of dispute resolution involves the seemingly intractable disputes surrounding our use of the western rangeland. This is an area of public resource policy where, by my experience, there is solid opportunity for lasting progress. Both ranchers and environmentalists have made real contributions to the western rangeland but both have serious defects in their positions. Both sides have failed to fully address the true public interest: achieving a fully sustainable western rangeland that will support a wide range of economic, environmental, and community values. We need and deserve a healthy range system that can sustain vibrant riparian zones; healthy uplands; productive watersheds; wildlife; the ranch cattle industry and the things it has produced—a uniquely western kind of society, steady, family-oriented, steeped in the honest values of hard work, and shouting out open space; and the quiet, understated pastel beauty, serenity, and spirituality of our western rangeland, which the ranchers hold in at least as high a regard as the rest of us.

Right now, these things are not being sustained, and ultimately both ranchers and environmentalists must share some responsibility for this. All across the West, our rangelands have been pounded by excessive use by ranchers—not all ranchers, by any means, but too many—who simply turn their stock out in the spring and round them up in the fall. The cattle tend to congregate in the riparian zones, destroying them, and they overgraze the uplands. One of many results of this is the unproductive, steep cut-bank streams, the clear majority of which are produced not by natural causes, but by overgrazing. The costs in watershed degradation, soil erosion, and lost wildlife habitat are beyond our capacity to measure.

Environmentalists have performed a major public service by calling attention to the situation, but the environmental movement has not been able to participate in making deep change. The truth is that

too many positions from the environmental camp—"cattle free by '93," for example—have the odor, if you will, of newly arrived easterners who object to seeing their new Hi-Tec hiking boots stained with manure. They have spent too little time giving honest respect to the ranching industry and the wide range of community benefits it produces.

The environmentalists have spent too much time on the wrong issues. They have focused too rigorously on below-cost AUMs (which plainly exist) and on the number of AUMs. The subsidies are not the issue—the total subsidy is relatively small in federal-budget terms and provides important economic benefits to western communities. Even the number of AUMs is, in most situations, not the issue. The Savory method—which has popularized the ideas of Gus Hormay, Fee Busby, Wayne Elmore of the Bureau of Land Management, and many other traditional range experts—shows that, for most spreads, better fencing and herding techniques can keep the cattle moving, can greatly improve the condition of both riparian and upland areas, and can allow ranchers to graze substantial numbers of stock while increasing the watershed, wildlife, recreation, and aesthetic values of the range as well. Alan Savory and his predecessors, however, have not been able to offer up a solution to the manure issue.

Two efforts on the Colorado Plateau—both promising, both new—approach this controversial issue in a cooperative way at the local level. In Arizona, ranchers along the Mogollon Rim developed an informal association called "6-6," named after the six ranchers and six environmentalists who first met together in 1989. The group has worked hard, getting out on the ground and reaching the first critical stage: ranchers agreeing that they have pounded the land too much and environmentalists acknowledging that the ranch cattle industry has much to offer. The group has expanded steadily and has become an ongoing symposium, with an expanding audience, on range management. The 6-6 association now is moving to the level of actually setting management plans for specific ranches that can be used as a testament to the idea that "range management practices must be changed but, when they are, the range can thrive." In Colorado, the Colorado Resource Roundtable has proceeded in much the same way. There is agreement that grazing fees are not the issue and that a simple fee increase would probably do more harm than good to the broad social and ecological goals being pursued by the Roundtable.

Dispute resolution comes in many forms, and not always with a wallop in the form of a federal statute. Depending on the circumstances, there may be a need to move slowly and create trust among fair-minded people who can spread the word to others, who can then spread the word further. Inventiveness. Spe-

cific responses to specific needs at specific times and places.

THE NAVAJO NATION PEACEMAKER COURT

A last example of creative dispute resolution on the Colorado Plateau involves the Navajo Nation Peacemaker Court. In 1892, as part of the United States' decade-long intensive effort to assimilate the Indian-ness out of Native American people, the Bureau of Indian Affairs imposed so-called Courts of Indian Offenses on most tribes. The basic law was promulgated by the Bureau of Indian Affairs and codified in the Code of Federal Regulations. These Courts of Indian Offenses, one of which was established at Navajo, adopted Anglo procedures and philosophy wholesale. Navajo judges in those courts did their best to incorporate Navajo traditions, but this was difficult within the federally mandated framework.

In 1952, the Navajo Nation exercised its sovereignty and formed its own judiciary, the foundation of which was Navajo common law. The Navajo courts have had a considerably distinguished history: among other things, the judiciary has grown to seven district courts and a three-member supreme court; provided for non-lawyer Navajo court advocates to represent parties who cannot afford lawyers; established a bar exam for lawyers who wish to join the Navajo Bar; written hundreds of opinions, some in Navajo, as precedent; and stood firm for the principle of separation of powers in the face of various assaults on judicial independence by former tribal chairman Peter MacDonald.

In 1982, the Judicial Branch began an innovative process called the Peacemaker Court, and peacemaking has steadily grown in use and stature. Traditionally, Navajos called in a *naat'aanii*, or peacemaker, to mediate disputes. Today, the Judicial Branch has recognized eighty-seven peacemakers—medicine men, elders, and other respected people chosen by chapters, the local units of government at Navajo. Peacemakers have the respect of the parties and the skill to get people to talk out their problems with one another. Parties in court can, if they wish, leave the adversarial system behind and decide to resolve their disputes, civil or criminal, in the Peacemaker Court. "Dispute resolution" is an accurate enough term to describe peacemaking, but Navajo judges eschew that term, perhaps because it is so *au courant* in Anglo jurisprudence, and the judges want to underscore the fact that peacemaking existed long before the language that created the term "dispute resolution" was heard on this continent.

The Navajo Nation justice system has been written about quite widely, and former Chief Justice Thomas Tso, current Chief Justice Robert Yazzie, and Justice Raymond Austin have been active in explain-

ing their system to the outside world in their writings and public presentations. Recently, I heard Chief Justice Yazzie offer a compelling explanation of the reasons behind peacemaking. His reasoning is commendable for setting out the philosophical basis for dispute resolution in our society as well as in the Navajos'.

Chief Justice Yazzie describes the Anglo-American courts as representing what he calls a "vertical" system of justice. "Judges," he says, "sit at the top over lawyers, jury members, parties, and all the other participants in court proceedings. Judges possess a tremendous amount of power [and] the parties involved in the dispute do not have as much power." Parties may not communicate freely with the judge, are subject to their lawyer's decisions, and tailor their testimony, not to the truth but to the litigation strategy. And, as he puts it, "the party with the most money can 'buy' justice because he can afford the best lawyers and legal procedures." There is almost always a winner and a loser.

Traditional Navajo justice, as Chief Justice Yazzie describes it, is "horizontal." He explains that "in the Navajo peacemaking system, all human beings are treated as equals. There are no rules to dictate how proceedings should be controlled. In the peacemaker process you can speak with the mediator. [The peacemaker] aims at one goal and one goal only—restoring true justice among individuals, families, and the larger community and society. This is done by allowing the wrongdoer and victims to 'talk things out.' No one is treated as the 'good guy' or the 'bad guy.' The ultimate goal of the peacemaker process is to restore the minds, physical being, spirits, and emotional well-being of all people involved." Peacemaking creates individualized solutions, which sometimes include restitution to the victim's family; community service; or a reuniting, in a family or divorce case, often accomplished through the healing of a traditional ceremony. There is, as Justice Yazzie puts it, none of the "eye for an eye, tooth for a tooth" notion of retribution implicit in the Code of Hammurabi and in our vertical judicial system.

CONCLUSION

These examples, including the philosophy of Chief Justice Yazzie, tell us a good deal about making policy and resolving disputes in the West. Everyone needs to be included. The process needs to be horizontal, not vertical, so that, among other things, results can be crafted with the free-flowing creativity and inventiveness, tied to individual places and circumstances, which is the hallmark of the best agreements we have reached to date. Sufficient data, agreed upon

by all the participants to the extent possible, need to be available. We must always look for opportunities to create new resources by conserving from existing resource use. Decisions should be made and implemented at the most local level possible.

Resolving disputes over natural resources in the West needs to proceed in accordance with contemporary demands and opportunities. We realize now that the traditional listing of multiple uses is far too narrow-gauged. Yes, minerals, range, timber, water, recreation, fish, wildlife, and wilderness are resources. But there are other resources that must be added to that list. On the Colorado Plateau, visibility, remoteness, and cultural resources are all critical resources of local, natural, and worldwide significance. So, too, are beauty, mystery, and spirituality. The list of valuable resources also includes the cultures of the small Mormon towns of southern Utah, embedded in that rough landscape for a century or more, and the world views and working societies of the tribes, there for many millennia longer than that. We must, hard though it may often be, identify all costs to all resources, people, and communities, and consider all of those costs when we make decisions.

We need to remember, too, that each resolution must rise organically from a place and its history. Any lasting resolution must be inlaid in its place. Stegner (1992) wrote in *Where the Bluebird Sings to the Lemonade Springs*:

History was part of the baggage we threw overboard when we launched ourselves into the New World. We threw it away because it recalled old tyrannies, old limitations, galling obligations, blood memories. Plunging into the future through a landscape that had no history, we did both the country and ourselves some harm along with some good. Neither the country nor the society we built of it can be healthy until we stop raiding and running and learn to be quiet part of the time, and to acquire the sense not of owning but belonging.... Only in the act of submission is the sense of place realized and a sustainable relationship between people and earth established. (p.206)

In this sense, most modern dispute resolution over natural resources in the West will merge with sustainability, ecosystem management, community planning, integrated resource management, and adaptive management. We must, through open, flexible, consensus processes, identify the natural, social, and economic values we are determined to sustain; define the geographic area over which sustainability will be applied; adopt some plan to

achieve sustainability; and then change that plan in a flexible way as new data and circumstances arise. We must recognize that sustainability will come, not in one grand overarching plan, but piece by piece, place by place, on a scale that offers up opportunities for participation by the local and the young populations.

In no remote sense do I mean to paint this as easy. On the Colorado Plateau, given that hard, creative work has brought some results, we still are not willing to manage the largest river in the Southwest so that it remains a river when it reaches Mexico. One hundred and eleven years later, the ache of the Navajo-Hopi dispute goes unresolved. The swords stay drawn on the Utah wilderness issue.

Although it will not be easy, I still say that in these next years people should remain tight with their current companion, idealism. The following passage is familiar to many people, like Shakespeare, Beethoven, or Picasso, but it is permissible to pull it off the shelf once again like a dog-eared *Lear*, to settle back in a seat at Symphony Hall for another Ninth, or to wander again the old halls of the Prado. For whether it is dispute resolution, sustainability, or the right future of the American West—I happen to think that the three are the same—do any of us have a higher calling than to call up the best we have so that Wallace Stegner's words (1969), his highest dream, come finally to pass?

Angry as one may be at what heedless men have done and still do to a noble habitat, it is hard to be pessimistic about the West. This is the native home of hope. When it fully learns that cooperation, not rugged individualism, is the pattern that most characterizes and preserves it, then it will have achieved itself and outlived its origins. Then it has a chance to create a society to match its scenery. (p.38)

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Beyond the Frontier Myths

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Abstract

The difficulties involved in reforming natural resources policy are explained through an examination of the cultural mindset of westerners and their political stance toward the federal government. Westerners want government subsidization at the same time that they resent government interference; they have accepted federal subsidization, which is interpreted as an example of American socialism, while maintaining conservative political rhetoric. Examples are drawn from federal water policy to illustrate this schizophrenia. The West must confront difficult economic transitions and move beyond its frontier mentality.

INTRODUCTION

A few weeks after he first sat down in the Oval Office, President Bill Clinton made a historic announcement. To help reduce the federal deficit, the federal government was going to exact higher royalties from companies mining metals and minerals on the public lands. It was also going to charge more for grazing permits on federal acreage and, once and for all, disallow any sale of the federal forests if the proceeds did not at least match the cost of negotiating the sale. In other words, the government, the major landowner in the American West, was going to run its business as if it were a real business and not the Salvation Army.

What was more historical than the announcement itself was the Clinton Administration's haste in backing away from it. The time that elapsed between the articulation of this policy and the abject abandonment of that same policy was exactly fourteen days. The reaction from many Westerners was smugly derisive; the reaction from conservationists was incendiary. Jay Hair from the rather conservative National Wildlife Federation said, "What began as a love affair, now feels like date rape." In retrospect, President Clinton may be asking himself whether it was dumber to try to reform federal resource policy or to give up on that effort so easily.

This paper was transcribed from an audiotape of the presentation given during the symposium.

The real issue here is that yet another president, a brilliant and thoughtful man and a savvy politician in many respects, gets a flunking grade when it comes to understanding the mind of the American West, or at least of that plutocracy of values that Charles Wilkinson calls the "lords of yesterday." President Clinton certainly has had company. Federal water policy is the subject that I know best, so let me give you a capsule history of about eight years of failed reform in that arena.

WESTERN WATER SUBSIDIZATION

As most people know, the federal government got into the western water business in 1902 with the creation of the Bureau of Reclamation and the Reclamation Act. At first, many westerners opposed the whole idea. In a culture that worshipped at the alter of Adam Smith and rugged individualism, a society with no welfare, no Medicaid, no Social Security, not even public roads, the government was not supposed to be building dams. In fact, the entire federal budget as recently as 1926 was approximately three billion dollars, which is about what it would cost to build *one* good-sized dam today. On the other hand, the reason the government even contemplated trespass into the water domain was because efforts by most everyone else had failed.

Once the Bureau of Reclamation began building dams, both the dams and the Bureau metamorphosed into institutions that the region suddenly could not live without. As early as 1923, the Bureau of

Reclamation's first commissioner, Frederick Newell, was publicly lambasting the reclamation program as a sentimentality "by which hard-earned money was deftly taken from the pockets of the American taxpayers." But west of the 100th meridian, he did not have much of an audience anymore. President Herbert Hoover detested government in any form unless it was shaped like a dam. The result was Hoover Dam, originally called Boulder Dam, which was authorized by Hoover and finished under President Franklin D. Roosevelt. Roosevelt, as everyone knows, adored building dams, and he built lots of them. But even his Interior Secretary Harold Ickes could occasionally be heard muttering that Elwood Mead, a solidly conservative Mormon reclamation commissioner, "would support any federal dam project—that is his job."

Serious water policy reform first began in the 1950s under President Dwight Eisenhower, whose political philosophy was pretty much what you would expect from a Chevrolet dealer in Portland, Oregon. As soon as he sat down in the Oval Office, Eisenhower announced a policy of "no new starts" on federal water projects. But three years later, he signed the then most grandiose public works appropriation in history, the Colorado River Storage Project Act. Eisenhower was persuaded to sign the bill by his Interior Secretary, Doug McKay, a Chevrolet dealer from Portland, Oregon.

Western Republicans loved federal dams; many eastern Republicans loathed them. But even a California Republican, Richard Nixon, never received enough recognition for trying to stop the erection of Teton Dam in Idaho, which dissolved in 1976 a few months after it was built. The collapse of Teton Dam, which took some of the Bureau of Reclamation's reputation with it in the flood, may have encouraged President Jimmy Carter to launch the first "full-court press" against Team West. That history is recent enough that many people still recollect it. Congressman Morris Udall of Arizona cosigned a letter to Carter urging him "to reform the water resources programs of the Army Corps of Engineers and Bureau of Reclamation," then went ballistic when Carter tried to do just that by stopping the Central Arizona Project. Governor Jerry Brown of California, the Jesuit's answer to John the Baptist, told everyone, "Expect less . . . the Era of Limits is here," but he was among Carter's critics when the president targeted a single California dam, Auburn Dam, for funding cuts that might have cost as much as the entire Central Valley Project, which at least includes a 300-mile aqueduct. Governor Richard Lamb of Colorado threw a fit because Carter put the Narrows Dam on his hit list, a dam that was ultimately opposed by most of the farmers who were supposed to benefit from it.

OBSTACLES TO NATURAL RESOURCES POLICY REFORM

So Bill Clinton tries and fails, at least for now, to reform three longstanding federal resource policies that he regards as giveaways. I admit that in a trillion-and-a-half dollar budget, these programs are fleas on the ticks that are lurching on the elephant's hindquarters. Clinton's number crunchers estimated that gradually raising grazing fees on Bureau of Land Management land from the current \$1.92 per animal unit month to \$5.00 would add a grand total of \$82 million to the federal treasury by 1996. Surcharging mining royalties over the same period would contribute another \$380 million. In other words, these two reform measures combined would collect, over four years, just enough revenue to pay interest on the national debt for the better part of an afternoon. It is easy to understand why the Clinton Administration did not want to get into a bitter fight with Senators Max Baucus, Ben Nighthorse Campbell, Dennis DeConcini, and all the Democrats in the West who were opposing him.

I believe that the Clinton Administration made a cosmic mistake. The mistake was not in proposing the reforms, as many westerners may think, but in backing away from them. There are 175,000 miners in the entire country, as opposed to nearly two million doctors and lawyers. Less than 2 percent of the nation's beef is produced from the public lands. If the president rolls over for interest groups like western ranchers, what happens when he collides with the medical establishment, the trial lawyers' lobby, or the insurance industry, which spent \$100 million in California alone to defeat a reform initiative that ended up passing? What Clinton had, thanks largely to Ross Perot, was a unique opportunity to break the stranglehold the resources plutocracy has on the public lands and waters of the American West. Fabulous water subsidies, grazing privileges sold for one-fifth the going rate on private land, and so-called timber sales where the taxpayers lose money—none of these policies caused our terrifying national debt, but they wonderfully represent the mindset that created it.

More significantly, Bill Clinton had an opportunity to cure the cultural schizophrenia that has bedeviled almost all presidents, Democrats and Republicans alike, in their efforts to reform natural resource policy on the public lands in the western states. The importance of that cannot be overstated because the federal government owns very little land east of the 100th meridian. Federal natural resources policies, by definition, affect mainly the West. Since these policies, for the most part, thwart all serious efforts to deal with a whole new set of environmental and economic values and concerns, they will be changed sooner or later. Now it seems like it will be later.

In *The Road Less Traveled*, one of the most illuminating books in decades and one I particularly recommend to anyone who scorns psychotherapy, Scott Peck talks about the two personality types he deals with most: neurotic people and those with character disorders. Most of us tend toward one or the other, but some of us are a little bit of both. As Scott Peck explains, the neurotic tends to feel that anything that goes wrong is his or her own fault. Neurotics are tortured by feelings of inadequacy.

Character-disordered people, on the other hand, want to believe that everything is someone else's fault. In extreme cases, they become psychopaths or at least sociopaths. Mostly they are people who never really grew up and act like children at their very worst, with attitudes of "I can't," "I won't," and "Gimmee." In Scott Peck's view, the character-disordered mind is often created by parents who are brutal to their children or who do not give them the attention or love that they need. They grow up feeling that the world owes them a fair shake but remain convinced that they will never get one. Some of these people, however, are the products of too much attention and indulgence. They are "victims," a dangerously overused word, of what some parents call "first-born syndrome." This syndrome is exacerbated in a cocoon of hypocrisy when things that are said are not meant and things that are really meant are not said.

At risk of sounding too much like a California pop psychologist, I think I recognize some of this syndrome in what one might call the mind of the American West. We westerners complain famously about government interference, about Washington bureaucrats telling us how to manage our lives and our land. In fact, we resent the fact that "they" own so much of "our" land. We think of ourselves as frugal and self-reliant, as rugged individualists, almost as superior beings compared to that rabble in New Jersey or, even worse, inside the Beltway. We also believe that a love of nature and wilderness has prompted us to live in the West. Some of this is true; much of it is nonsense.

First of all, "they" own so much of "our" land because nobody wanted it. The timber companies, to be sure, coveted the lands that became National Forests so that they could lay waste to them overnight as they did to their own lands from Michigan all the way west to Washington. But most of the Bureau of Land Management's land, over 300 million acres, had no takers during the homesteading era, so it ended up in the government's hands. Neither these lands nor the National Forests "belong" to us westerners any more than the Everglades belong to Florida or Mt. Rushmore belongs to South Dakota. They are national resources.

The reality is not that Washington owns the American West; it is that the West owns Washington, D.C.

AMERICAN SOCIALISM

Let me return to the reclamation program; I can never get away from it. I am willing to argue with anybody all night that this has been America's most durable example of socialism. Uncle Sam offers to build a colossal dam that no private organization, no utility, no irrigation district, not even a state except maybe California could contemplate. The farmers who receive nearly all of the conserved water are exempted from paying interest on the taxpayers' investment. If you happen to be paying off a home mortgage, you fathom what that means. Your \$100,000 home, or, if you live in California, your \$5 million home, actually costs only that, instead of three times the sale price thanks to compounded interest over thirty years. I think it was John Maynard Keynes who called compounded interest the eighth wonder of the world. Since I am paying off a home mortgage in Marin County, I know exactly what he is talking about.

Dozens of economic analyses have concluded that the interest exemption alone on reclamation projects forces taxpayers to shoulder 60 to 90 percent of the cost of delivering irrigation water. On top of that, everyone along a river with a reclamation project gets free flood control. Irrigators usually get subsidized power as well. In the case of several river basin-wide projects, the Bureau of Reclamation has built cash-register dams, Glen Canyon Dam being the biggest and most notable example, to further subsidize already subsidized water and power costs. With other projects, it has simply forgiven outstanding debt. The Belle Fourche Project should have been paid off forty years ago, but it never will be paid off because of a quaint formula known as "the ability to pay." I wish someone would apply such a formula to my house in Marin County. If this is not socialism for the few, then someone had better explain to me what it is. The Bureau of Reclamation itself estimates that this vast featherbed of subsidies has amounted to between \$40 and \$70 billion over the life of the federal reclamation program. That, to paraphrase Everett Dirksen, is real money.

What about grazing fees? Perhaps someone can persuade me that ranchers running cattle on public lands should pay only \$1.92 per AUM (animal unit per month) when the going rate on neighboring private lands is often about \$10 per AUM. The forage on private lands is somewhat better, so the private rancher might drill a few wells that the government does not. Unless that private landowner serves champagne and *foi gras* around the nightly campfire, he is not offering anything worth \$8 more per animal per month. In fact, Bureau of Land Management economists reckon that few, if any, federal grazing

rights holders would abandon such lands until the costs reached \$5 per AUM, which is the ceiling the Clinton Administration proposes, not the floor.

What about timber sales below costs? Fifteen years ago, just before I left the Natural Resources Defense Council, our resident forestry expert and I co-authored a long article suggesting that in some National Forests, the costs of managing the timber sale, mapping the area, preventing erosion, and building access roads was greater than the proceeds realized from the sale. The timber companies and the Forest Service reacted the way the tobacco companies did forty years ago when some irresponsible medical researcher suggested that smoking causes cancer. Today, the tobacco companies still insist that smoking and cancer are not necessarily linked, claiming there is not conclusive evidence. But there is no real argument anymore about below-cost timber sales. They have occurred to the tune of perhaps five or six billion dollars over the Reagan-Bush interregnum. We are not even talking about the ruined fisheries, the lost top soil, the plundered habitats, or other costs that our progeny will have to bear.

What I hear from people who support these kinds of programs is that we need below-cost timber sales just like we need affordable grazing fees and just like we need reasonably priced water, or civilization as we know it will disappear. It scares me when serious people say such things. This brings to mind the officer in Vietnam who ordered a village leveled beyond recognition and then said, dead seriously, that "we had to destroy that village in order to save it." People over forty years old probably remember that quote.

WESTERN CULTURAL CHARACTER DISORDER

When I say that we westerners suffer from a kind of cultural character disorder, that is exactly what I mean. We curse government, yet we scramble madly to suckle from its huge belly. The states where conservative, anti-government sentiment is most intense, where a Democrat or a Sierra Club member needs a visa to cross the state line, are the same states that depend most on subsidized irrigation water or on "fire-sale" federal grazing fees. The capper line for a front-page editorial that ran in the ultra-conservative *Arizona Republic* during the Jimmy Carter era was, "Now, dammit, give us our dam." As it turns out, Arizona irrigation farmers cannot afford Central Arizona Project water at subsidized rates even without Orem Dam, to which the editorial writer was referring. "Give us our dam." Give *me* a break.

The American West is a region that I have adopted as home for sixteen years now as a transplanted mid-westerner (I almost qualify as an old-timer), that I dearly love, and that I probably will never leave. But I still think the region needs to get real, needs to "get a life," if you will. For almost a century, our politics, especially where resources are concerned, have been conducted at this level of discourse: give me this, give me that, give me more, then leave me alone. We have allowed hypocrisy to run so wild that we do not even recognize it any more. Scott Fitzgerald once wrote that the true measure of genius was to hold two irreconcilable ideas in one's mind at the same time. His friend Hemingway rejoindered that Fitzgerald, when he felt like it, could get things exquisitely wrong. Perhaps this is an example of what he meant. Our true genius in the West has not been holding irreconcilable ideas, because anybody can do that, but getting away with it for so long. Therein lies our self-inflicted tragedy.

By and large, the American West has been unable to escape its history. We needed federal water projects to stabilize the economy, to end the chaotic rhythm of boom and bust. As someone who lives in a redwood house, I would not dare argue that all or even most old-growth timber should have been preserved for all time. I am even willing to concede cows a place in the western landscape, though they have badly degraded a very large acreage. Historically, however, there always had been *more* forests, *more* rivers, and *more* range. The circle is now broken. Old-growth timber in the Pacific Northwest is down to the last 5 percent. The worthwhile water projects are all gone, as any Bureau of Reclamation engineer will admit off the record. Western range needs to be rested and then, perhaps, even returned to the buffalo, because we really do not know whether cows belong in rangeland landscapes. Only our traditions and our politics say it is not so.

THE WEST GROWS UP

Grazing, logging, irrigation, mining—these are economic activities that I think have a place in the future of the American West, just as they did so predominantly in its past. In terms of economics and employment, though, they do not amount to much and they will amount to less and less over time.

In California, which is the richest irrigation empire on earth, agriculture amounts to 2.5 percent of the gross state product and creates about 1.5 percent of the state's jobs. If you count every conceivably related dollar and every conceivably related job, you still cannot "goose" that figure much above eight or nine percent. But irrigation consumes about 89 per-

cent of the state's water supply. Three low-value but very water-consumptive crops—irrigated pasture, irrigated cotton, and irrigated alfalfa—consumed almost half of that irrigation water supply as recently as 1988. Now companies are threatening to leave the state because, among other reasons, they do not foresee a reliable water supply.

The collapse of the logging economy in the Pacific Northwest simply cannot be blamed on a poor little owl, not when 90 percent of the old-growth forests have been logged, mostly since the end of the Second World War. If it were not for the spotted owl, thousands of loggers would not be out of work today, but they would assuredly be out of work in ten years. I do not know of any language in the Organic Act that created the National Forests which says that all of America's old-growth timber should be decimated in ten more years so a few thousand people can hang onto doomed jobs.

My own adopted state, California, now has the highest rate of unemployment in the entire nation. The main reason for this is the loss of hundreds of thousands of jobs in defense-related industries over the last several years. Should we have kept producing dozens of B-1 bombers and other Star Wars gimcrackery to battle a non-existent Soviet empire so that a bunch of aerospace engineers bidding up Redondo Beach condos could stay employed? I doubt that many people would say yes unless they were defense contractors who fled California for Utah. But the same wrenching, painful dislocation that afflicted California's First World, high-tech economy is in store for those regions of the West that have grown up but refused to develop out of a resource-based frontier economy.

In my view, the West's single greatest economic asset is its wealth of nature, of open space and wilderness. I used to detest putting a price tag on untrampled nature, but the figures I have seen are so encouraging that I mind less and less. In Colorado, about a quarter of the state's water is used to irrigate alfalfa fields which add less than \$200 million gross value to the state's economy. Tourism, by contrast, is about a \$5 billion industry in Colorado now. Do tourists visit Colorado to watch alfalfa grow? Perhaps some do, but I would venture that most come for something that they simply cannot get at home—a roaring, tumbling Rocky Mountain stream, a stream that has somehow been spared the cash-register dam or the irrigation dam that was authorized years ago but is not yet built. Flowing relatively unperturbed through a piece of wonderful scenery, that stream may be worth far more to Colorado than it would be if it was diverted to irrigate alfalfa and pasture grass. If that stream flows well enough to support a rafting industry and a fine strain of wild trout, it is worth even more. Fishermen spend a lot of

money. If some of the water that is diverted for alfalfa is bought by a company that relocated from California because life had become intolerable there, it is worth more still, especially in high-paying, skilled jobs.

In California, one thousand acre feet of reliable water each year can support as many as fifteen thousand jobs in the computer software industry, an amazing figure. The same amount of water, one thousand acre feet, used on an alfalfa farm supports only eight jobs. These figures come from the State of California. Fifteen thousand jobs compared to eight. On top of this, most high-tech industries, not to mention activities such as rafting and fishing, do not really use water. They use it, but they do not use it up. The water is not evapotranspired like it is when it is spread across hundreds of thousands of agricultural acres under a broiling sun. Most water diverted for industrial or recreational activities, not half of it (as is usually the case in irrigation), goes back into the river, treated I might add, to generate hydroelectricity at downstream dams, producing yet another benefit.

Amory Lovins from the Rocky Mountain Institute once did a cocktail napkin calculation for me on this theme. His conclusion was that 100 cubic feet per second of water left in a river like the Animas or the Dolores in Colorado with several downstream dams poised to use that water to generate electricity was worth much more left in the river for hydroelectric production alone than for the four thousand cows, or their equivalent weight, that could be raised on that water if it was diverted.

Thinking about the value of natural resources left where they are, like the man in Montana referred to earlier who wanted to buy timber and not log it,¹ is absolutely alien to our mindset. Ecology is supposed to be a subversive science, and when ecology agrees with economics, for once, the combination is subversive indeed. I hasten to add that I would not want to see the whole Animas Valley or the Cache Valley turned into giant Silicon Valleys or tourist traps. We would make a mortal mistake if we just walked away from our agricultural roots, or our ranching roots, like a snake slithers out of its old skin. That is emphatically the case in California, where I live. There you have a Mediterranean climate that raises about 250 different high value crops like few other places on earth. If Silicon Valley developers came around today and said they wanted to locate huge, amorphous, anonymous buildings on one hundred thousand acres of the best agricultural orchard land in the world, and if I were dictator, I would point to the nearest hillside and say, "Go over there and forget about taking this land out of production."

¹See Martson, this volume, page 1

What we need to recognize and come to terms with is the fact that the frontier does not exist anymore. What we need is not a frontier mentality but an island mentality, much like Japan's which is, I think, in large measure responsible for that nation's success. We need an ethic where resources, scarce resources, are put to the most valuable and, more important, most sustainable use. But let's not, in doing

that, ruin the rest of the world, which is what the Japanese seemingly want to do. When we have come that far, we can say that we are no longer marching forward into the past but marching backward into the future toward the essential and eternal American West that our dear and terribly missed friend Wallace Stegner called our "geography of hope."

Expanding the Relevancy of the Environmental Movement

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Abstract

Our approach to managing natural resources should be guided by a moral and ethical approach to life as well as by practical and scientific considerations. Examples abound of instances in which Americans have created and willfully ignored environmental externalities. These externalities have had racist consequences through their disproportional impacts on people of color, and they pose serious consequences for future generations.

INTRODUCTION

I am treating this as an Earth Day presentation. Today is the day after Earth Day, and this symposium is the only opportunity I have to share my environmental thoughts. For this Earth Day observation, I would like to remind us all of the only admonition that President Clinton repeated during his State of the Union message. He said twice, "It is time to remember tomorrow."

It has been said that either you know that all life is sacred and intertwined or you don't. Most indicators of the way we manage our natural resources, at least in my opinion, demonstrate that we do not know any such thing. Here we are at an academic institution. Most of us are professional land managers, but I believe that the spiritual, the moral, and the ethical should govern our approach to resource management. Our failure to know culturally, legally, politically, economically, administratively, and professionally that all life is sacred and intertwined is a significant challenge to the way we do business.

Every day, as we engage in our careers and make necessary choices in terms of budget setting, prioritization, strategic planning, permit decisions, regulatory decisions, and enforcement decisions, we should ask ourselves quite explicitly and then answer the following two questions. Neither question is new, but I do not know if we ask these questions of

ourselves every day. First, is land a commodity, or is it the resource upon which we all depend, physically and spiritually, and upon which the future depends? The second question intrigues me as I talk with ecologists: Is the ecology that I practice a quantitative science built upon chemistry, botany, biology, atmospheric physics, and geology, or is it a moral and ethical approach to life itself? The answer to both of these questions is, of course, "both." Land is both a resource and a commodity; ecology is both a quantitative and analytical approach and a spiritual and moral approach to life.

In these answers lies the tension of the natural resources professions. That tension is demonstrated by the fact that we not too jokingly call many of our colleagues combatologists, particularly the biologists and the geologists and the botanists who had the misfortune to work in the Department of Interior for the Watt and Hodel administrations. The fact that there is even a need for Jeff DeBonis to take his Association of Forest Service Employees for Environmental Ethics (AFSEEE) and expand it to create Public Employees for Ethical Responsibility (PEER) is an abysmal commentary on our profession and on many people's answers to those two questions. These are indicators that many of us would answer both of these questions wrong. Implicitly, of course, not explicitly, instead of *both* commodity and resource, instead of *both* science and an ethical approach to life, we would answer commodity, not resource, or we would answer science, not moral and ethical approach to life. This is wrong, but all too American.

This paper was transcribed from an audiotape of the presentation given during the symposium.

Just look at the phrases we in America have coined or crafted around those two wrong answers. One of these phrases you have all heard: "multiple use." Those are code words, of course, for "me first." They are code words for science, not morality and ethics. Another American saying that is designed around the wrong answer is "out of sight, out of mind," representative of the tall smokestack approach. Two other American phrases are "cost-benefit analysis" and "risk assessment." Both are concepts crafted around the wrong answers to the questions which should govern our professional approach to natural resources management.

Many of you may have read, and if you have not you should, a four- or five-part series in the *New York Times* from April 1993. The *New York Times* articles called cost-benefit analysis and risk management—in my view two very sad and impoverished approaches of America in the 1950s—the environmentalism of the future. My assessment of those articles is that they were written by scientists in a primal scream of rage who clearly got the answers wrong and did not get the message. Life is so much more *America*.

Life is also so much more *simple* when we externalize the difficult-to-quantify from our calculus, when we marginalize or mock or ignore the spiritual. I had an opportunity to hear my first Rush Limbaugh radio program recently. A number of us were driving over to watch a colleague run the Boston Marathon when this jerk came on the radio saying something about "you know, Al Gore, that environmental wacko." When I reached over and changed the station, the lady driving the car said that was Rush Limbaugh. There is an example of American marginalization of the spiritual, of a person who could not get the answer right if he tried.

We put our medical waste on Indian reservations. We discount the impact of private actions on the future. We fly our hazardous waste to Third World nations, including several in our own country called Appalachia and Louisiana. It is so damned American, so damned Western, to create externalities and then willfully ignore those externalities. Not to be oblivious to them, but to professionally and willfully ignore them. It is no accident that this thoughtless view of selfish business practices, public and private, is called "cowboy economics." Cowboy economics, as all of you must know, is the economics that dismisses environmental effects as negative externalities. I, as a westerner, have a challenge for those of you in this very respected western audience. Devote yourself, while you are asking those questions, to tracking down the wily externality and do not just stamp it out, but internalize that externality in the calculus of answering those two questions.

ENVIRONMENTAL EXTERNALITIES

What do I mean by externalities? I mean *theft* as in "thou shalt not steal." I mean theft by the up-winders from the down-winders. I mean theft by the rich from the poor, by white from black, by the present from the future. That is an externality. Let me give you a couple of examples. My favorite one, because I have been there and spent quite bit of my time at the Sierra Club fighting this issue, is for the protection of the coastal plain of the Arctic National Wildlife Refuge. When discussing this issue, never call it ANWR, which is such an ugly word coined by the oil companies. It is the Arctic National Wildlife Refuge, a fantastically beautiful place and unique on the Arctic Ocean coastline. Next time you are near a globe, turn the globe so that you are looking at the refuge from the North Pole and observing the circumpolar shoreline. The coastal plain of the Arctic National Wildlife Refuge is unique in the entire span of the Arctic. Standing on Sadlerochit Peak about 2,000 feet high and about 20 miles inland, I could see the ocean and pack ice, the shoreline, wetlands, tundra, and rolling foothills, and then, soaring behind me, the Brooks Range with hanging ice fields, a land of big animals—grizzly, wolf, polar bear, elk, moose, and the wonderful caribou.

People would have you believe that it is in our national security best interest and in our economic balance of trade interest to drill for oil in the Arctic National Wildlife Refuge, that last known potential pool, and to suck America dry at a time when oil is at its cheapest per barrel and when we are doing nothing to conserve it but are blowing it out our tailpipes and wasting it. That is the most egregious of all irresponsible attitudes toward the future. It is in the national security interest of whom? Our children? I think not. Leaving the last oil in someone else's nation—that is a good idea? Sucking America dry first when oil is cheap is a good idea for our children and for that energy resource? Absolutely not.

Examples abound. Tall stacks of the 1930s and 1940s allowed Dayton, Ohio, to put their soot up in the air so that residents of Columbus, Ohio, or people across the lake in Canada breathed it. Out of sight, out of mind. Chip Rawlings, author of the book *Sky's Witness*, is measuring the snow pack and the lakes in the Wind River to assess the impact that air pollution emissions from Los Angeles and Salt Lake City have had on that wild, remote place. In her book *The Refuge*, Terry Tempest Williams talks about the impact nuclear blasting had on Salt Lake City's down-winders. Just look at the morbidity rates on Shoshones and Navahoes from uranium mining and from those nuclear blasts, an externality of clear moral dimension. Look at East St. Louis, a city which

is almost entirely black and entirely poor, where the creeks glow in the dark and children ride bicycles through them and their tires do not last for very many months. The petrochemical plants around East St. Louis are located in other jurisdictions, in fictional cities which are separate from East St. Louis and isolated from the tax base and the electorate of East St. Louis. Talk about externalities.

Look at Cancer Alley along the Mississippi River between Baton Rouge and New Orleans. A Third World nation called Louisiana was seeking, until recently, a plastics plant owned by a Taiwanese company with a pollution record so bad that the Taiwanese government would not allow the plant to be located in Taiwan. When the company went looking for a Third World nation, it found one called Louisiana. The Taiwanese company proposed to locate the plant on an old plantation with two villages right next door, and guess who lives in those villages? The descendants of slaves live there in almost entirely black communities.

A survey was done about six months ago of the amount of toxic pollutants located in zip code areas of California. Does it surprise you to learn that the zip code areas with the greatest number of pounds of toxic emissions are in South Central Los Angeles?

One of my favorite externalities revolves around the price of gasoline in this blind nation of ours. When I was a child growing up in San Antonio, gasoline was 17 cents per gallon. At 17 cents per gallon, gasoline was more expensive then than it is today at \$1.30 per gallon. Gasoline has never been cheaper in the history of this nation than it is right now. If you have traveled in Italy, you know that to fill up your tank you must pay between \$5.00 and \$5.50 per gallon. Filling up the tank of even a tiny Fiat puts a heck of a dent in your wallet. You would drive differently in Italy.

One of the intriguing externalities is a direct result of our gluttony, our demand for cheap gasoline, and our willingness to waste cheap gasoline, particularly in the West. That externality is the likelihood that, if conservative estimates of sea-level increases from global climate are accurate, by the year 2050 between 100 million and 300 million people will be environmental refugees from deltaic Southeast Asia, forced to move from low-lying areas of Bangladesh, Thailand, Cambodia, and Vietnam as sea levels rise. This would be a direct result of our willingness to not pay the full cost, to externalize so much of the cost, of cheap gasoline.

In Somalia, despite the current warfare, two nations of the European Community are working with local warlords to locate a toxic waste incinerator and a toxic waste landfill. Thus, when the fighting ceases, Somalians may experience another tragedy, perhaps one far longer lived. The European Community is

very willing to externalize from their calculus any of the health costs that might be visited on Somalians in the future. Somalians have black skin, so people in the European Community find it quite easy to externalize those costs on them.

About two years ago, I spent some time talking with Qu Geping, who is the administrator of the Environmental Protection Agency in the People's Republic of China. Mr. Qu told me that he was gravely concerned for the future of my grandchildren as well as for the future of his own. He said, "I have every confidence that you in the developed world will sharply reduce emissions of carbon dioxide, but by the year 2050, almost every Chinese household will have refrigerators. Very few have them now. We will get our refrigerators just as your grandfathers did, cheap and dirty, using CFCs and soft coal as the power source unless you in the developed world pay the differential for non-CFC, solar, or other nonsoft-coal energy sources. If you in the West are willing to pay for that, then we will get it expensive and quick as opposed to cheap and dirty." Paying the differential is in our enlightened self-interest. I believe that this is one of our grandparents' externalities coming home to roost. We of this generation owe the Chinese and the Indians payment in compensation for overuse of the limited atmospheric sink that has led us to the brink of global warming.

ENVIRONMENTAL RACISM

Half of the examples I have just mentioned are western; half of them involve people of color, both domestically and abroad. I believe that a society that turns a blind eye to those externalities is a racist society. A racist society will not last long on this planet. Germany understands that and so does Japan.

Germany is acting on that understanding. There, regulations to be applied to automobile manufacturers in the near future will require that automobiles be built with recyclable parts and that each automobile manufacturer buy back an old car for every new car that it produces. The manufacturer must include in the price of every new vehicle the cost of buying back the vehicle, recycling the old parts, and putting those recycled parts into new cars. That is the kind of internalizing professional land managers could do. I reiterate: track down that wily externality, track it down and internalize it, just as if the future of our nation were at stake, because it is.

The era of an American environmental movement dominated by the interests of white people is over. We need to know that. Of the hazardous waste facilities in this nation and those companies involved

in toxic waste emissions, 80 percent are located in or adjacent to communities of color while 65 percent of Americans of color live in polluted communities. Those locational decisions are made by the blind eyes, starved minds, and empty hearts of externalizers, the persons that I challenge you to root out. The morbidity rates of people of color in the United States are higher than of white people. Life and death issues are at stake.

I have had the privilege of attending a number of conferences over the last six months. The one held in New Orleans early in December was the largest conference on environmental issues that I have ever attended. About 2,500 people were there; 300 of us were white. The first National People of Color Environmental Leadership Summit in Washington, D.C., attracted 600 people; 100 of us were white. In January, EDGE, an environmental discussion group coalition in California, brought together 300 people; about 100 of us were white. The communities of color understand this issue. Ben Chavis, a good friend of mine who is the new executive director of the NAACP, will be bringing environmental justice to the top of that organization's agenda.

I come to you as a westerner, but I come from the island nation of California. The island nation of California is the most diverse society every attempted on this planet. Within three years, those of us in the formerly oppressor class, or as my wife calls us, "people of pallor," will be in the minority. There will be no majority community. This already affects young people. My children went to grade school in an integrated community where they were part of the 15 percent that were white in the entire school district. The total number of white males entering the workforce in California by the year 2000 will be under 14 percent. California has the most diverse society that has been established, and the voters will reflect that diversity, not just in California, but in Florida, Texas, New York, Boston, Miami, and other places. The voters of this nation are going to be determining environmental policy.

In his inaugural speech, President Clinton said, paraphrasing President Kennedy, that we must ask not what is in it for *me*, but what is in it for *us*. He may not have known it, but he was joining me in asking that you track down that wily externality, track it down, stamp it out, internalize it. The earth is not just a commodity, it is mostly a resource that we depend upon.

CONCLUSION

I spent this past Easter morning almost alone strolling through Walden Woods and around Walden Pond with the mist rising off the broken ice on the surface of the water. Walden Pond is only six acres, but it is a very magical place. I was lucky to see it much the way Thoreau saw it: almost alone. For decades, Walden Pond has been the destination of millions of pilgrimages, from the 1930s through today. On a summer Sunday, as many as 25,000 people may be there because of what it symbolizes.

In our hearts, as Americans, we know that all of life is sacred and interconnected. We just have to correct our professional bias, our body economic, and our body politic with that spiritual reality. Remember the seventh generation and identify it. We *are* the seventh generation. I urge you to read again James Fenimore Cooper, who wrote seven generations ago in one of his *Leatherstocking Tales* called *The Pioneers* with tears in his words, about the killing of the bears and the over-harvesting of the maple trees. Track that externality down, natural resource professionals. Find it and root it out. If you do that, you will always, in small and large ways, answer "both" to the questions posed, and you will not allow your boss to continue to get the answers wrong.

Nancy Newhall ended her epic poem "This is the American Earth" with the words, "tenderly now let us commit ourselves and turn to the earth; it is time to remember tomorrow."

Views of a Commodity Producer on Natural Resources Conflicts

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Abstract

Developing consensus about desirable choices in public land and resources management requires an informed public. People must understand our nation's dependence upon forest products, its sources of wood and fiber supply, and the economic and lifestyle consequences of limiting United States timber harvests when demand remains strong. Gridlock caused by people polarized over timber harvest issues has diverted their attention from the more unifying concept of preserving forest ecosystem processes. Forest products companies have much to contribute to understanding and preserving forest ecosystems.

INTRODUCTION

I began my career in the forest products industry, planning to work in the lumber business. The year was 1965. As in most long journeys, my destination changed and today, more than ever, the exact terminus is uncertain. Kaibab Forest Products Company, for whom I work, is no longer just in the lumber business. Our company is performing many services and producing a number of products. The company's activities benefit the renewable resource of forests, American society, and rural economies. Not only does our company pay its way, but its activities are desired and necessary.

INFORMED CHOICES

Our company is dependent upon public timber for raw materials for our mills. As people in our society continue to govern themselves and to provide direction for the management of public agencies, it is important that they understand what choices are available to them. With adequate options supported by the appropriate data, an informed public hopefully can develop consensus about desirable choices.

Let me provide a brief test of our knowledge about wood and forests through a series of questions and answers.¹

Which of the following raw materials are used in the greatest quantity by weight in the United States today: steel, brick, wood, plastics, aluminum, or concrete? The answer is wood. In fact, wood exceeds the total of all of these except brick.

The raw material that can be produced with the best impact on our environment is: steel, brick, wood, plastics, aluminum, or concrete? Wood is the answer.

True or false: The United States is currently a net importer of lumber and other wood products. The answer is true. Lumber imports in 1990 amounted to 20 percent of the United States' consumption.

True or false: If managed intensively under sustained yield for wood volume, privately owned forest lands in the United States could meet our nation's wood fiber demand. The answer is false. The fact is that at any point in time, depending upon demand, we will require that 20-40 percent of the United States' consumption of wood and fiber products come from public lands. This amounts to about 10-20 billion board feet per year.

Timber from the national forests is currently being harvested at what rate per year? The answer is one-half of one percent per year since 1984. The average number of acres harvested annually on the national forest since 1984 has been 760,000 of the 191 million acres in the National Forest System.

The public owns approximately what portion of the nation's total timberland? One-third is the answer. The vast majority of this land is located in the twelve western states where the public owns well over half the total land base and 70 percent of the timberland.

Approximately what percentage of publicly owned timberland is permanently restricted from timber harvest? The answer is 20 percent of the public land nationwide which is capable of growing commercial timber is, by law, permanently restricted from harvest.

There are presently how many acres of existing old-growth forest? The answer is 15 million acres, with 8.2 million acres of old-growth forest located in Oregon and Washington, at least 2.5 million acres located in California, and 6 million acres located in Idaho and Montana. Well over half of these acres of existing old-growth forest are permanently off limits to timber harvest.

INGREDIENTS OF GRIDLOCK

Why have lumber prices doubled in the last year? Is it because of increased demand caused by lower interest rates? Is it because of speculation in the commodities and futures markets? Is it because of hoarding by the wholesalers, retailers, and builders? Is it because of hurricane Andrew and its aftermath? Is it because of restrictions on the availability of timber to harvest?

Several birds, because of the threatened, endangered, and sensitive species provisions of the Endangered Species Act, have become icons of the anti-harvesting and, specifically, the anti-clearcutting movement. These birds are the Northern Spotted Owl in the Pacific Northwest, the California Spotted Owl, the Mexican Spotted Owl in the Southwest, the Marbled Murrelet on the West Coast, the Red-Crowned Woodpecker in the Southeast and, finally, the Northern Goshawk in the West. The Endangered Species Act has given the anti-harvest interests the perfect vehicle through the courts to dictate the direction of public land management. The forest industry's vulnerability has been its single-minded adherence to the silviculture practice of clearcutting. These are the perfect ingredients for the gridlock we find ourselves in today.

Appeals on Forest Service decisions (there were 1,659 in 1992) and lawsuits on various forest management issues have ground the public forest management agencies to a standstill, reducing harvest levels by nearly 70 percent on public lands. As a reality check for the environmental movement, if the United States Postal Service and its operations were similarly attacked, it would take weeks, not days, to receive a single letter.

An April 2, 1993, a *Wall Street Journal* editorial entitled "Ecosystem Babbitt-Babble," noted that Andy Stahl, a resource analyst with the Sierra Club Legal Defense Fund, revealed at a law clinic how best to

devise an ecosystem approach. He said, "Until legislation is adopted which protects these forests, we need at least one surrogate, if you will, that will provide protection for the forests. . . As a strategy for protecting old-growth (forests) matured, it appeared that wildlife would offer the most fruitful hunting grounds. . . Thank goodness the spotted owl evolved in the Northwest, for if it hadn't, we'd have to genetically engineer it." The editorial went on to say that, "the Northern Spotted Owl has been shown to thrive in second-growth forests."²

The following table demonstrates the trends and potential problems resulting from restrictions on timber supply (due to anti-harvest pressure) in the face of relatively strong demand for and national consumption of wood and fiber.³ Between 1987 and 1992, timber production on western and federal lands declined dramatically without offsetting increases in supply from other areas or sources. The drop in federal timber harvests between 1987 and 1992 is equivalent to 404,000 average-sized houses.

Forest Supply and Demand (Billion Board Feet)

	1987	1992
Western Production	23.9	18.6
Federal Harvest	11.4	5.8
Lumber Imported	14.6	13.3
Lumber Exported	2.4	2.6
Southern Production	12.5	13.9
Other Sources	1.8	1.6
Total Consumption	50.4	45.3
Housing Starts	1,600,000	1,200,000

Our southwestern forests today are overstocked with all sizes of trees, one-inch DBH to over twenty-four-inch DBH trees.⁴ On the North Kaibab, the total standing inventory in 1909 was 1.9 billion board feet. By 1992, 1.5 billion board feet had been harvested. But by 1993, there were 3.1 billion board feet in standing live tree inventory. There are more trees today in all tree sizes than there were at the turn of the century. In 1909, trees per acre averaged about 46; today there are over 113 trees per acre average on the Kaibab Plateau portion of the Kaibab National Forest.

The reason for this forest abundance is simply because of aggressive fire protection and prevention. Since the 1920s, by greatly reducing fires in the Kaibab ecosystem, we have increased the forest's total growth and yield, while at the same time providing the world's largest known concentration of Northern Goshawks. We now have over 92 known pairs in an area of one-quarter million acres. To date we know of only three Goshawk nest sites on over 100,000 adjacent acres on the North Rim of Grand Canyon Na-

tional Park. Surveys have been conducted there as well as in the National Forest.

The Kaibab National Forest management is being switched from even-aged shelterwood harvests to uneven-aged group selection cuts of one-quarter to one-third acre in size. The Forest Plan is now to manage for the Goshawk and its nineteen prey species, which require a healthy forest in each stage of size, age, composition, and stand structure. Interestingly, the Goshawk and its prey species are dependent upon forest regulation, not preservation.

FOREST ECOSYSTEMS AND THE NEW FOREST SERVICE'S BUSINESS

The important concept that we must all understand and accept is that it is not necessary to preserve the resource on the land; rather, it is critically important that we preserve the ecological processes that forests evolved under in the first place. To this end we must engage in historical reconstruction and define the presettlement forest. We must assess the current condition of the forest. Then, in some manner yet to be developed, we must establish the future forest condition that people can agree upon, factoring in the capabilities and biological realities that have evolved on each unique land area.

My choice would be to have a more restored, pre-European condition in our western forests. Then my company's efforts could be to directly support the American people and our forest ecosystems. We could then contribute directly to the yield and bounty of healthy and sustainable forest ecosystems, locally, regionally, and nationally.

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Living Within the Circle: A Native American Relationship with Our Natural Resources

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Abstract

Philosophical perspectives on land and natural resources held by Native Americans in the Columbia River Basin are examined for the ecological insights that they provide. The peoples' history and culture, based upon living in relationship with mother earth, is explained. The impact of non-Indian development of the Columbia River system on their way of life is examined. Tribal perspectives on non-Indian resource management are offered. Opportunities and principals for cooperation between groups in managing Columbia River Basin resources are proposed.

INTRODUCTION

To begin, I would like to recognize the native people from this area, the Northern Ute Tribe. I know that there are many people from the Ute Tribe who can speak about these issues in the same manner that I will speak them, and much more eloquently, especially the elders. As you see, I am a young person. I am only thirty-two years old, and if you subtract fifteen years from that, it means that I was sixteen when I started.

I have been fishing on the Columbia River ever since I remember. I am from the Yellowbird Band; that is our clan. We are from the place where the Columbia and the Snake River come together. The words that I am going to speak today are not my own words, but they are words of my elders. They are words that I only carry and pass on to my own children and share with you today. I am humble to be here. I am honored to be here. I look in the crowd and I see a lot of faces, a lot of hope, and that makes me feel good to be here.

I will talk a little bit about where we are from, the origin of our people, and our perspective, or our world view as you might call it. As this world was being

prepared by the Creator for the arrival of Indian people, the Creator placed salmon into the powerful forces of nature to provide food and spiritual sustenance. We are like the plants on this earth. Our food was put here as plants to feed us. The Creator placed the salmon, the deer, the elk, the roots and the berries, and the other animals and plants. It is as if our bodies are the very end of this earth, still growing, while our ancestors buried in the ground support our life, the life of the living. The Creator placed the Indian people on this land to take care of the land, the plants, the animals, and our mother earth. He put the water on this earth, and made it flow into the rivers and lakes to water this great garden and to quench the thirst of the people. And so it was since time immemorial that our people lived. The great river is known as "the Big River," which is also known as the Columbia. This river was the bloodline of our people just as you have blood in your veins. It was the bloodline of the land and of the salmon that migrated to feed many people. Our people always look upon this land and speak of the earth as our mother who nurtures us as children, just as the women who carry on these sacred ways of bearing children nurture their own. It was said, "All things are equal, all things are connected."

This provides a glimpse of the origin of our people, our religion, our lifestyles, our societies, and our relationship with our natural resources. This under-

This paper was transcribed from an audiotape of the presentation given during the symposium.

standing and philosophy is a powerful ecological image, and it represents the strong spiritual connection we have with this land. Today I would like to share with you just a small part of this life, and what I am revealing is just a small part of the knowledge that was handed down, because I live in two worlds today. On one side I am native. On the other side, I am Irish, and that's why I fight so hard, at least that's what my grandmother told me.

I want to share a small part of this life we call "living within the circle," which today is much more difficult, especially for young people. The circle is losing its strength, but native people also gather in these types of events to think and ponder how we can bring that circle back into a whole. First, I would like to talk about four areas of the traditional, tribal, and cultural livelihood of my people. The reason I speak of that again is to give you a perspective of where we come from. The Indian people here may have a different perspective than my native people. Second, I will talk about the impacts of civilization and non-Indian development on the Columbia River ecosystem and the native people that live on the river. My third topic is a tribal perspective on non-Indian resource management. Finally, I will discuss opportunities for integrating traditional native principles and ideas to create a new Native American relationship with this land and the natural resources.

NATIVE ECOLOGICAL PERSPECTIVES

Many Euro-Americans view mother nature in a different light or from a different perspective than American Indians—often as an enemy, perhaps to be contested or controlled. Either we rule the land or we defeat it in the attempt. In this Euro-American world view, the land is a power to be harnessed, as has happened in the Columbia River Basin. It is harnessed for our needs, and it is continuing to be harnessed for an ever-expanding and exploitative society, something we must reconsider. This land is also viewed as a commodity, to be sold or used as an instrument for profit and the production of wealth.

In contrast, traditional native culture recognized and honored the unwritten law of nature and of the Creator. With the creation of human beings, land, water, air, plants, and animals, as I described earlier, instructions were included for us to live by, the unwritten law. It is not a law that man has written, but a law that we understand from our Creator. The Creator authored perfect laws to nurture, protect, and provide the life of mother earth. The Indians honor these laws.

It is hard for us to separate these things, as we are taught that all life is interconnected. That teaching

was based upon respect for and responsibility to the natural resources and people's actions to nurture them and not waste them. Our elders possessed an intuitive and spiritual understanding of what we call ecosystems. That is not a new term to us; many of the buzz words heard today are actually ingrained in cultures thousands of years old. These cultures understood life cycles based upon generations of empirical evidence and observation of teaching. The meticulous accumulated knowledge of the land and its creatures is a valuable and rich heritage many native people still have today. The first ecologist recognized and perfected the utilization of hundreds and hundreds of animals and plants for sustenance, for medicinal purposes, for tools, and for ceremonial and spiritual purposes.

Our livelihood and life cycles were directly tied to the seasonal abundance, distribution, and life cycles of the plants and animals and of geographical and environmental conditions. The collection and preservation of foods was a seasonal pattern for the river people, of whom I am a part.

The winter season was a time when we built and maintained our tools for fishing, digging, or whatever it was we needed. It was a time of telling legends, not myths or fairy tales, but legends which explained the moral principles of the people. We explained nature, which explained our relationship to it. It was a time of deep spiritual connection to the earth with the medicine dance in the winter. Winter was a healing for the people. It was also a time for visiting and having fun, exchanging ideas and activities, and looking forward to the new foods and the new spring that was coming.

As spring brought winter to an end, the new foods were eagerly awaited. Of great importance was the spring Chinook salmon and the roots, but before the new foods could be gathered we held our first salmon ceremony, which we still do today. It was a ceremonial feast where we recognized the great provider, the river, and the salmon, and performed thanksgiving to our Creator. Thereby the religion and livelihood, both social and economic, were indeed interwoven. Fish were dried and stored. Roots and other plants were also dried and stored, always preparing for the next winter. As the river rose in May, families packed and traveled up into the blue mountains. We traveled there through usual and accustomed areas for gathering. Often we would see our relatives from upriver or downriver or from the top of the mountain, and we would join together. It was a great time for the people. A single family at that time might gather as much as fifteen hundred pounds of dried roots and pack them a hundred miles back down to their winter villages.

In the summer, in late June, the river began to subside. The blue-back Chinook and steelhead were

filling the rivers. The family returned to fish and again preserve the food. At this time, many berries, gold currant, gooseberries, service berries, and chokecherries were gathered. In August came the prized huckleberries, and once again our people conducted the first food ceremony for the berries. This gave us a chance to get out of the blistering sun and go up into the mountains where it was cool. As the fall Chinook migrated, the big runs came into the river. The fishers returned to the river as others stayed in the mountains to hunt elk and deer, while yet others were to the south and to the east in the pines, hunting antelope and buffalo. As winter began to settle in, the plateau families returned to the river, where the cycle began again.

Such was the importance of understanding ecosystems to our people, understanding the life cycles, the conditions, the seasonal changes. Such was the importance of sharing and community cooperation. The social, religious, and economic activities were interwoven with all aspects of traditional native life.

IMPACTS OF COLUMBIA RIVER DEVELOPMENT ON NATIVE PEOPLES

With the coming of the European colonists, the centuries-old way of life for our people was forced to change. Non-natives encountered the natives of the Columbia Basin and witnessed their resource management, their abundant fish and wildlife, their clean air and water. At one time it was told that you could drink in the Columbia River, and see peaceful, prosperous communities of people along its banks. The arriving migrants wanted the land and, probably even more, the resources that had been perpetuated for generations. At the center of our homeland was the Great Columbia and the great salmon runs which provided the world's largest inland fishery. Also coveted were the rich fertile valleys, ancient forests, and great prairie grasslands. As the number of settlers increased and began to claim our homelands, conflicts arose. Battles were fought and tribal nations unavoidably entered into treaties with the United States government. Our treaties were completed in 1855.

In return for the cessation of millions of acres of land and abundant resources, upon which the wealth and civilization of this country was built, the tribes reserved to themselves and were guaranteed that their cultural, social, spiritual, and economic reliance on salmon and their traditional fishing grounds would be perpetuated. The reservation of lands that we now live on and the perpetual right to self-government were also secured. Through treaties, the United States government promised forever to protect these

reserved rights and resources, I read once, in history books that did not have my people in them, that "Great nations, as great men, are only as good as their word." Almost immediately, the treaties were violated. Over the last one hundred and fifty years, as government and private industry have developed the Columbia River, these treaties have continued to be violated.

The impact on native people was immediate. Beginning in the 1880s, large scale commercial fisheries began to over-harvest and deplete the once abundant salmon stocks. In the 1890s, the first irrigation dams for agriculture were constructed, most without passages for salmon. Deserts were turned into fertile farm lands. As big hydro-electric dams came into existence in the 1920s, the salmon runs began to disappear.

The Columbia River, which is the fourth largest in North America, drains a 298,000 square-mile watershed which is fed by portions of seven states and British Columbia. The Columbia River system has been harnessed into the world's largest hydro-electric plant, generating an average of 12,000 megawatts of electricity, a dozen times what the city of Seattle uses in one day. Water is held back, harnessed, and diverted by more than one hundred dams. Fourteen of them are on the Columbia itself. At Grand Coulee Dam, the third powerhouse, each of a half dozen generating units uses as much water as usually flows in the Colorado River, the river that sustains America's Southwest.

The great Columbia River was reduced to a series of reservoirs in less than seventy years, in one generation. The great tribal fisheries were forever gone. Kettle Falls, way up near Spokane, where 600,000 pounds of salmon were caught annually, was inundated. Celilo Falls, with one of the greatest fisheries ever witnessed, was inundated in 1957. The river people literally were crushed, both spiritually and physically, heartbroken and destitute over the loss of the heart of their life. The great river and the salmon were threatened. This tragic event is a powerful symbol of how development of the Columbia has resulted in cultural, social, religious, and economic losses for the native people.

TRIBAL PERSPECTIVES ON NON-INDIAN RESOURCE MANAGEMENT

Often we do not think about these things. When I looked at history books, I could not find these events. My elders had to talk about them, and I had to study and begin to understand these things. Cheap electricity and water brought industries and more development to the Basin with increased demands

and impacts on the natural resources. An example of this is the Hanford Nuclear Reservation, which made plutonium for the atomic bomb dropped on Nagasaki. The price we now pay is the nation's biggest concentration of high-level radioactive waste and the contamination of this magnificent ecosystem.

Everywhere, progress has impacted salmon. Habitats are being destroyed by overlogging, overgrazing, antiquated farming and irrigation practices, industrial and agricultural pollutants, and urbanization. State and federal agencies have ignored the signs of the resources and managed the water, land, air, fish, and wildlife strictly for an ever competing, demanding, and growing group of users.

State and federal hatcheries were built to mitigate for the lost habitats, but this development ignored the problems and treated the symptoms. Over one hundred hatcheries were built in the Columbia to address the losses incurred by the hydro-electric dams from Bonneville Dam upstream. Nearly all of the hatcheries, however, were located and released fish *below* Bonneville Dam. This was also done in recognition that tribal fishing areas were above Bonneville Dam and also that these facilities, these hatcheries, contributed little to the rebuilding or restoration of those salmon runs that were being decimated.

Over-harvesting continued as the native populations declined. Until recently, the tribes were a lone voice in advocating adequate flows and passage through the hydrosystem, the protection and preservation of fish habitat, the reprogramming of hatcheries to release and rebuild dwindling salmon runs above Bonneville Dam, and restrictions of Pacific Ocean harvest rates. The tribes were proposing an ecosystem management long ago. They call it "gravel to gravel management." We looked at the main parts of the river. We looked at the life cycle of the fish wherever they went, and we began to identify where the mortalities were. But with the growing environmental movement and with the recent listing of fish stocks under the Endangered Species Act, greater public attention finally has been focused on what has happened to the Columbia Basin.

Now the tribes, as I described earlier, are beginning to redefine their traditional management approach by accepting and integrating contemporary science and management methods. Furthermore, tribes are seeking cooperative, collaborative efforts and remedies with state and federal fish and wildlife agencies. A region-wide planning, implementation, and monitoring program is being instituted. The organization that I have been working with, The Columbia Basin Fish and Wildlife Authority, is the first that I am aware of which has involved thirteen Indian tribes in the Basin, five state agencies from Oregon, Washington, Idaho, and Montana, and two

federal fishery agencies, the National Marine Fisheries Service and the U.S. Fish and Wildlife Service, in sitting down and planning the restoration of these populations.

The work is not easy. It is not easy for me, as a native person, to sit there and listen while the salmon runs are declining, but it is something that has to be done. I have to balance myself when I speak on behalf of the state and when I speak on behalf of the tribe. It is very complex, as you may be aware, and we have not done a whole lot, if you really think about it. The Northwest Power Planning Act was passed in 1980 and the salmon runs have not increased. As a matter of fact, we have lost three runs of salmon.

But there are examples where things can work. In the area where I have worked for about ten years this is what has happened. For seventy years, the tribes had no salmon, only steelhead. Irrigation in the lower part of the river had nearly run the river dry. There was no water. The tribe's stance was, "You put the water back in the river or we are going to sue you with treaty rights," and the irrigators' stance was "Well, let's battle then." And then people started to sit around the table and talk to one another. The levelheaded people from the tribal leadership said, "Let's work on something where we can have a win-win situation. The local economy is important to the tribe as well because we live in this contemporary society." So the irrigators sat down with us and we began to work things out. We had the help of other groups as well. This is an example of local communities, tribal and non-tribal, sitting down and working through these difficult issues.

OPPORTUNITIES FOR CREATING NEW RELATIONSHIPS WITH THE LAND

Finally, I would like to share with you ideas for opportunities for communities, tribal and non-tribal, to work together in developing a new relationship with this land. There are some principles that should guide this effort. One principle is that there needs to be a recognition by the greater American public of the utility of Native American values, practices, and relationship with the land from a historical and contemporary perspective. This may require reevaluating Euro-American theological principles of dominion over the land, the animals, and the plants to recognize principles of equality, respect, and interrelationship. As Charles Wilkinson noted when he talked about the Navajo use of a horizontal judicial system,¹

¹See Wilkinson, this volume, page 5

everyone is equal. We need to begin thinking in that mode.

We also need to examine contemporary and traditional approaches to integrated natural resources management on reservations. It is happening all over Indian country right now. These reservations represent the islands. They are a microcosm of the society around them. We deal with the same issues. Tribal leaders cannot escape that; our future cannot escape that. We have limited resources. We have social, economic, and natural resources problems, but we are beginning to look at them in a holistic manner. Tribes are beginning to manage their resources on a sustainable basis, to integrate appropriate technologies with economic development, and to address social, health, and community problems through invigoration of traditional tribal cultures, practices, and religion.

There is rebirth in Indian country now and we are beginning to combine these approaches with dominant societal values because we have to live, as I have said, in both worlds. There needs to be a recognition by non-Indians of the value of working with tribes. The tribes have a long-term interest in their

communities just as non-Indians do; tribes share many contemporary needs of local non-Indian communities. We look, as has been said, seven generations ahead.

Within this cooperation, however, local, state, and federal agencies must recognize tribal sovereign status as governments, not just as another interest group. Tribal treaty rights, which most often provide a legal and federal obligation for protection and preservation of natural resources, can be a tool for the restoration of ecosystems as well as for maintenance of local economies. Win-win situations can be crafted.

And finally, to the young people of this country, myself included, you are the ones who will lead us into the future. Open your hearts and your minds. Touch the earth, the mother of all of us. Begin to feel the beauty in the rhythm from a spiritual stance. Try to understand the land, the plants, the wildlife, not only from a scientific standpoint, but as your relatives, your brother and sister. I have hope for a new Native American relationship with this land and with our natural resources, a hope that lies deep in the heart of our children and which will lie in the hearts of all of our future generations.

Broken Pledges, Ducked Decisions

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Abstract

Wildlife bureaucracies originally designed to help hunters and fishermen have become less concerned with enhancing populations of game while becoming more engaged in non-game programs. Having mismanaged game on lands they control, governmental agencies and some national non-governmental conservation organizations now threaten private landowners' initiatives to protect and manage wildlife. Limited entry on private land should be given more serious consideration as a way to preserve wildlife and enhance sporting experiences.

INTRODUCTION

Since the generation that spawned the U.S. Fish and Wildlife Service and its fifty state variants is long gone, younger conservationists seem largely unaware that these bureaucracies were originally designed to help hunters and fishermen in the same way that the Department of Agriculture was designed to help farmers and ranchers. Unlike the farmers and ranchers, however, sportsmen were able and willing to pay for what they wanted out of license fees and earmarked taxes rather than using money siphoned from general revenues. Fish and wildlife agencies could raise fees and expand their bureaucracies so long as they kept their covenant with sportsmen to increase fish and game.

For the first eighty or so years of conservation history, hunters and fishermen were represented by coalitions of clubs politically organized along the lines of the farmers' grange system. From 1886, with the founding of the first Audubon bird clubs by hunter and ornithologist George Bird Grinnell and the creation of a Division of Economic Ornithology and Mammalogy by hunter and mammalogist C. Hart Merriam in the federal Agriculture Commission, a close working relationship has existed between government and non-governmental organizations concerned with the perpetuation of American wildlife. The heyday of this cooperation came in the 1930s when the Pittman-Robertson Act was written by executives of the National Wildlife Federation and Ducks Unlimited was founded to do on the Canadian side of the border what the U.S. Department of the Interior was trying to do in the Lower Forty-Eight to protect wetlands

and enhance waterfowl production. Over the past century, the blending of private initiative with public authority has resulted in almost every substantial milestone in conservation history.

DECLINING WILDLIFE EXPERIENCES

Times have changed. Everywhere human populations are smothering the planet's capacity to renew itself. Hunter and conservationist Fairfield Osborn, who was also president of the New York Zoological Society, saw the problem as far back as the Thoughtless Fifties when he published a pair of books entitled *Our Plundered Planet* and *The Limits of the Earth*. Osborn understood that the sportsman is on the frontline in the battle to preserve nature because he requires two essentials for an optimum outdoor experience: the sight of lots of game and the sight of nobody else but his guide or other people in his party. The man on the street may still believe there is lots of room out there, but the sportsman knows that this is no longer true. Increasingly, he finds himself crawling over a mountain ridge or floating around a river bend, anticipating opportunity, but finding instead a crowd of people already there.

Yet rather than acknowledge that quality outdoor recreation is based on limited entry—whether such limited access results from a sparse human population or is imposed by law—American politicians insist that any form of exclusion is elitist and undemocratic. By extending such logic, we may expect that one day every baby born in this country will be entitled to go to Harvard or Stanford. After all, testing

and grades are inherently discriminatory. Whereas the word *discrimination* once implied high standards and taste, today it suggests only bigotry.

Thus, in the name of democracy and access for all, most state resource agencies continue to drag their heels on developing substantive testing for hunting and fishing licenses. For a majority of conservation agencies, it appears that perpetuating jobs and promoting bureaucracy is more important than perpetuating game and promoting quality outdoor recreation. In the process, the sportsman's reputation has been devalued, and slob hunters and fishermen are driving ethical wildlife consumers from the field. Rather than go to the heart of these problems with an apprentice system like the ones successfully pioneered by the Germans and Czechs—European peoples whose non-hunting majorities hold hunters in high esteem—conservation agencies in the United States petition legislatures for more money to hire more wardens. The wardens, in turn, convert outdoor recreation into a law-and-order issue. (I expect to see any day now a television show about the stake-out and arrest of fly-tiers who dare to use undocumented starling feathers or children who try to sell bait without a license.)

So long as hunters and fishermen believed their fees were going to stock streams, restore big game, and pay for the enforcement of sensible laws protecting wildlife, they accepted periodic raises in the cost of their licenses. Now, however, sportsmen have learned that stream stocking is an ecological no-no—unless it is to re-establish a long-lost species or subspecies which few, if any, anglers will be allowed to fish for or keep if they catch by mistake—and that states have gone just about as far with big-game restoration as they intend to go and presently spend an increasingly larger share of their budgets trying to re-establish rare or endangered non-game species. Sportsmen even find their money being used to subsidize state publications that duplicate and compete with information and services provided by private sector magazines which support themselves and pay a profit to investors through circulation and advertising. Yet, whereas the editorial staff of *Field & Stream* feels increasingly queasy about publicizing hotspots and encouraging still more people to use them, conservation agency information officers appear to feel no shame at all for doing the same thing.

So long as sportsmen believed that state agencies were primarily concerned with enhancing populations of game, they were content to indulge the state's non-game programs and the conceit of publicly funded outdoor magazines. But the quality of hunting and fishing has fallen off so dramatically most everywhere in the past fifteen years that sportsmen are understandably reluctant to see any part of their license fees and taxes used for other purposes, espe-

cially if those purposes are likely to lead to conflicts with game species or end up preventing hunters from using a national wildlife refuge system they helped create in the first place.

Not long ago, I toured several national wildlife refuges here in the West deemed critical to the North American Waterfowl Management Plan. State agencies had decided to introduce otters to these refuges, even though in the case of at least one refuge, historical records provided only the most circumstantial evidence that otters ever existed there. The very fact that that watershed had traditionally been a prime waterfowl production area suggests the opposite, for otters love to harry waterfowl. On my coastal farm in Virginia, for example, I have seen a hooded merganser jump straight into the air like a pintail to escape the torpedo-like bulge of an attacking otter in shallow water. On my farm, the giant aquatic weasels have even killed nesting Canada geese.

Refuge managers who use funds from the North American Waterfowl Management Plan, yet simultaneously accept otters from the state, are deceiving themselves and the public when they say there is no conflict. They call what they are doing "ecological management," which is an oxymoron because that phrase generally translates into no management at all. Once otters are established and begin making inroads on nesting canvasbacks and grebes, there is nothing refuge managers can do about it. The public at large, conditioned by preservation-oriented nature films, will never allow those managers to harm a single hair on an otter's hide, even if canvasbacks—already down to fewer than half a million birds—were to become even scarcer than at present.

BUREAUCRATIC THREATS TO PRIVATE WILDLIFE MANAGEMENT

Private landowners, however, still have the ability to choose, which means a genuine capacity to manage wildlife. But for how much longer? I rent the hunting rights on my farm each year to a small group of sportsmen who are just as happy to see otters as I am. They do not begrudge them an occasional merganser or even a goose. But locally breeding blackducks is another matter. Today, they are possibly rarer in the mid-Atlantic region than otters. If otters kill many nesting blackduck hens—and as such birds continue to decline, otter predation becomes more significant—my renters would expect me to add otters to the raccoons and foxes I currently trap and remove each winter.

This statement is likely to incur disapproval. Some people, particularly those who work for states or for the federal government, may reflexively wonder if I

am legally entitled to trap otters. The answer is, yes. But why would they think of such a question except to condemn or enforce a personal moral judgment?

Is an otter worth more than a black duck? For that matter, is an otter worth more than a mallard? The answer depends on local circumstances that only local landowners or surrogate local public land managers can determine. The difference is that whereas I, a private landowner, still have some capacity to act based on the best available information, public land managers increasingly do not. And since nature sentimentalists have succeeded in making a mockery of the word *management* on public land, they are now working to destroy its validity on private land as well.

Yet, rather than help private landowners remain independent of such environmental extremism, state resource agencies frequently play into the extremists' hands. In South Carolina, for example, a strict interpretation by the state of laws affecting wetlands prohibits landowners from repairing centuries-old rice dikes and controlling (meaning *managing*) water levels in adjacent fields, thereby giving the landowners an opportunity to grow and flood grains to attract waterfowl and improve shooting. Yet when the state acquires such diked land, the laws are overlooked, the dikes are repaired, and a new public shooting ground is created. The difference is that whereas the private landowner would have restricted shooting to no more than a couple of days a week, the public ground is hunted relentlessly from dawn to dusk, day after day, and is soon burned out. Who is doing more to sustain wintering waterfowl: the sportsman/landowner who wants to see many more birds than he kills, or the public land user who wants to kill all he sees?

In Michigan, we have the absurd case of Richard and Nancy Delene who bought 2,400 acres on the Sturgeon River in 1981 and set out to enhance its biodiversity. In April 1993, the Barga County Soil and Water Conservation District made Richard Delene its "Outstanding Agricultural Cooperator of the Year." At the banquet, Cooperative Extension Director Jim Krench said, "[Delene] believed in wetlands well before it was fashionable. . . . He used his own land, equipment, and money to develop . . . wildlife ponds. One thing you can't help but realize is when he's [out near the ponds], he comes alive with enthusiasm. There's a spark." Meanwhile, in April 1994, Michigan was suing Delene for failing to get all the proper permits. No one in the state denied that Delene's work represents a net gain for wildlife; the bureaucrats were merely miffed that he started without their authorization. Michigan was seeking a permanent injunction on any further habitat enhancement by Delene and demanding he put his land back the way it was or face fines in excess of \$1.2 million.

Not all state agencies are as arrogant as those of South Carolina and Michigan. In late April and early May 1994, the Virginia Tech Cooperative Extension Service and the Virginia Department of Forestry sponsored a series of seminars entitled "Private Property Rights—How To Stay in Control of Your Land." The purpose was not only to give landowners "a better understanding of the public policies, environmental regulations and taxes that offset your management options," but also to help landowners "develop management strategies that will minimize the impact of these policies on achieving your landowning goals" and discuss "the steps to be taken to modify laws and regulations that [landowners] may not find in [their] best interests."

Virginia, I fear, is an exception to most states' indifference to landowners' concerns just as Washington State's new program to develop stricter standards for the licensing of hunters is an exception to the generally superficial attitude by the states toward hunter education. What compounds the frustration of our best and brightest sportsmen and landowners is that the non-governmental organizations which once represented them in the political arena no longer do so. The suburban-bred administrators of main-line non-governmental organizations appear to share their public counterparts' view that landowners are not to be trusted with nature. The only kind of management the non-governmental conservation community is willing to accept is "ecosystem management" which, as noted before, usually means no management at all.

What was once a conservation calling has become merely a job but with the prospect of a six-figure salary, if an ambitious person remembers never to stick his or her neck out too far on behalf of principle. Cash flow has become the principal criterion of conservation success. Is it any wonder the non-governmental organizations outdo even governmental agencies in their preference for profitable sentiment over thankless science?

Most non-governmental organizations still serving the sportsmen do so through single-species programs focused on private lands. Contrast, for example, the phenomenal growth of Quail Unlimited with the corresponding decline of Ducks Unlimited. The difference is that, although both organizations promise more birds, it is easier for Quail Unlimited to deliver on its promise with non-migratory quail on private farms and managed woodlands that have restricted shooting and ample predator control than it is for Ducks Unlimited to sustain even a tiny fraction of the formerly fabulous flights of highly migratory wildfowl which are shot at from dawn to dusk on almost every public marsh they visit. Furthermore, until Ducks Unlimited starts spending money for predator control on wetlands it already leases rather

than trying to acquire still more acreage to enhance a total that exceeds the organization's capacity for proper management, Ducks Unlimited will continue to fail in its fundamental mission to provide more ducks.

The action in waterfowl conservation today has shifted from Ducks Unlimited to local groups in states like California, Minnesota, and Wisconsin. A dramatic way to demonstrate the importance of this shift is to compare what Ducks Unlimited has done in a two-county area of eastern Virginia with what a homegrown club of do-it-yourselfers is doing in the same area. For the past twenty years, the Eastern Shore chapter of Ducks Unlimited has raised an average of \$20,000 a year at its annual banquet. To date, only about \$15,000 of the more than \$400,000 sent by the chapter to Ducks Unlimited headquarters has been returned to the two counties to protect or restore local wetlands. Of even greater importance, however, these wetlands produce no more waterfowl today than they did before Ducks Unlimited helped acquire them.

Meanwhile, a five-year-old organization called the Eastern Shore Waterfowl Trust, that relies entirely on volunteer labor, has put up and maintained over 400 woodduck nesting boxes, more than 50 Canada goose nesting structures and, with financial assistance from both the Agriculture and Interior departments, improved wetland habitats in at least nine locations in both counties. Furthermore, Trust members trap raccoons and foxes in the winter to give nesting blackducks and mallards a better chance of survival the following spring, and remove snapping turtles in April and May to give ducklings a better chance of fledging. This has all been accomplished at a total expenditure of under \$30,000—including the lion's share that Uncle Sam chipped in. It does not take an accounting genius to calculate which organization is giving local waterfowl enthusiasts more ducks for their bucks.

In the eastern half of this nation, most conservation initiatives are still being carried out on private property by private citizens. State biologists may be cannon-netting and collaring geese or drugging bears and pulling teeth, but the data they develop are doing little or nothing to put more geese or bears into the system. What wildlife needs today is not more monitoring, but more fundamental gamekeeping—more predator control on behalf of scarce waterfowl and more culling on behalf of overly abundant deer. Yet gamekeeping is spurned by bureaucrats and academics reluctant to make unpopular decisions and obviously happier with computer models than the untidy and politically charged world of nature.

What sportsmen find most offensive about public resource policies today is that they are promulgated with the underlying attitude that government knows

best. The angry response of governmental agencies and their non-governmental allies to the swelling Land Rights and Wise Use Movements reveals how arrogant, self-protective, and ignorant of the outdoor recreational crisis such bureaucracies have become.

I am neither a Wise User nor a Land Rights Rebel. But I am a good enough journalist to sense something significant when an audit report (#92-1-833) by the Department of the Interior's Inspector General citing The Nature Conservancy, The Trust For Public Land, and, to a lesser degree, the Conservation Fund for what amounts to graft is ignored by nearly every newspaper and magazine in the country. When I tried to sell my own story about the Inspector General's findings, liberal editors did not like it because The Nature Conservancy is one of their most sacred of Sacred Cows, and conservative publishers would not run it because many influential Americans are making a lot of money out of their cozy relationship with the Conservancy.

Since I thought the story important, however, and since I wanted to combine what the Inspector General had found with my own discovery of mismanagement on Nature Conservancy farm lands, I gave my article to the *Land Rights Letter*, a publication, as its subhead says, "for Americans dedicated to preserving our heritage of private property rights." By appearing in such a "radical rag," the facts of the matter were even more shunned than before by the polite press. It seems that my journalistic colleagues find it more fun to work up anxiety about gays in the military than to publicize the fact that The Nature Conservancy is buying land with public money at more than market value, and that some of this land may have slight ecological merit.

Yet just how radical is the *Land Rights Letter*? Its founder and on-going publisher is a 42-year-old mother of two who lives on a 300-acre farm in Maryland. Ann Graham Corcoran holds an undergraduate degree in wildlife biology from Rutgers University and a master's degree in environmental science from Yale University. At various times in her life, she has worked for the National Rifle Association, the National Audubon Society, and The Nature Conservancy. This latter employment revealed to her the contrast between what The Nature Conservancy's pretty publications say it is doing and what it is actually up to. And since what it and comparable organizations are up to is opposed to the private management of wildlife, Ann decided it was time to blow the whistle with her own newsletter.

The basic problem with The Nature Conservancy is, not that it has a master plan, but that it has no plan at all. For over a decade, it has largely improvised policies as it has gone along, mostly in response to faddish thinking and market forces which have little to do with genuine wildlife management. As

someone who, like Ann Corcoran, was formerly quite close to the organization, I can attest that although The Nature Conservancy once accomplished a lot with surprisingly little, its inclination to wheel and deal has gradually overwhelmed fiscal and scientific restraint. Whereas The Nature Conservancy's *raison d'être* was once to acquire unquestionably valuable wildlife lands at pre-speculation prices and turn the properties over to management-oriented public agencies like the U.S. Fish and Wildlife Service, The Nature Conservancy is now happy to accept a family farm which the previous owner thought would be protected in perpetuity, sell the land to a developer, take the profit and use it to buy property of not always proven ecological worth, often above fair market value, in order to flesh out a refuge whose manager does not have sufficient funds or political support to manage the land for which he is already responsible.

CONCLUSION

A journalist's job is to comfort the afflicted and to afflict the comfortable. The American sportsman is presently afflicted by too many comfortable state conservation agencies and non-governmental organiza-

tions. At a time when most sportsmen—particularly those living on the eastern half of the continent—have begun to realize that the future of outdoor recreation lies within the private sector, they are increasingly harassed by public and non-governmental organization officials who insist that private initiatives are inherently wrong. Instead of receiving the educational and financial support we need to do the work that the government is no longer able or willing to do, land-owning sportsmen are treated as environmental Neanderthals by the very agencies and organizations we helped create.

Hunting and fishing in America may never again be what they were when, as Captain John Smith noted, immigrants expected to be masters of their own labor and land. But hunting and fishing can continue to be viable and respected forms of outdoor recreation, even as they are in a Europe where wild boar are hunted in crowded Belgium, wolves still roam the mountains of Italy, and conspecifics of our own grizzly bear still dig roots and rodents from the Pyrenees to the Balkans. Limited entry on private land has long been the key to preserving wildlife in Europe. Isn't it about time we explored the European example to find ways of stopping the fruitless practice of trying to put whatever is left of wild America under the aegis of inherently mediocre public agencies?

Seeking Consensus through Community and Cooperation

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I thought today was wonderful. To have the lack of heat and the presence of light at a meeting like this was unimaginable five or ten years ago. I think the setting here and the level of discourse were also unimaginable in the past. We may take what happened here today for granted because we all have evolved, but I think the dynamic we had should be recognized. We are future thinkers; we do not think of this meeting as the experience but as preparing the way for actions.

I am not going to summarize today's proceedings as much as react to the speakers. I will start by reacting to Don Sampson's comments because he stimulated a string of thoughts. My wife Betsy and I were lucky enough to teach a course at Wallowa Lake this February. Wallowa Lake is in the Wallowa Mountains, near Joseph and Enterprise in eastern Oregon. It is a beautiful lake. The course was a very moving experience; sixty people or so attended, a real mix of environmentalists, people who want to see Hell's Canyon made a national park, ranchers, people who absolutely hate the idea of a national park in Hell's Canyon, and loggers. We taught the course with a rancher-writer, Teresa Jordon, and a cowboy poet named Hal Canon. One of the most moving moments for me came when an older woman in her seventies or early eighties, who had grown up in Hell's Canyon on a ranch, recounted how her family ranch had been condemned or taken away when her family was given a "take it or leave it" offer by the Federal Government. When she visits that ranch now in Hell's Canyon, it breaks her heart because the ditches and irrigation system have been let go, and, as she sees it, the place has deteriorated and gone to weeds. Her story was a story of the working people in the West, of real people pushed out of a life that they cared about and to which they were loyal.

These comments were transcribed from an audiotape of the symposium proceedings.

Recently I stumbled across a television documentary on how the West was lost. It was a segment of a six-part series attempting to view American history from the Native Americans' perspective. The segment I saw happened to be about the Nez Perce and how they were evicted from Hell's Canyon, the Wallowa Mountains, and Wallowa Lake. They were driven out, forbidden to come back, and harassed, chased, and slaughtered as they attempted to escape to Canada. Their story did not negate what I heard from the older woman at the course we taught, but it put a different cast on it.

Today at lunch,¹ I talked about my little part in the destruction of the West I loved. When we moved to Paonia as outsiders 20 years ago, we immediately began improving it a little by changing the school system, getting a health food store, and establishing a public radio station. Paonia was a perfect little rural working town, but it just needed these few things. Such changes were being effected by busy immigrants all over the West. Now we have another wave of immigration into the West that is a major threat to the region as it now exists. I try very hard not to become an old timer as I think about it, not to continuously mourn what is lost and say, "Gee, those were the days and it's terrible now." I see many examples of people who are like that. Yet I think we need a certain amount of recognition of the damage we do if we get up in the morning and if we act. A sense of loss comes with living; those of us who are parents and have grown children know that incredible sense of loss.

Marc Reisner reminded me a little of me because of the kind of journalism we practice at *High Country News*. We love to do parachute journalism in the West. We will go into a town and write a story that the local journalists cannot write. They generally cannot write it for two reasons: maybe they are tied

¹Earlier in the day, Ed Marston was the Utah State University Convocations invited speaker in honor of Earth Day 1993.

into the local power structure so they cannot write about the people in power; or, they see the world as much more complicated and textured than those of us from outside see it. I go in and I see a great story, I see black hats and white hats, and I see drama. They see Joe and Sally going at it just like they always do rather than a dramatic moment in time.

Although Marc Reisner is a westerner—I do not deny that California is the West—his base is different from a rural western town or a place like Logan, which is almost a city. When Reisner discusses economic rationality and advocates letting money decide what to do, I think, yes, water being put on alfalfa is low-grade economy, but at the same time without that alfalfa and without that cow, what would go there, what would move into that vacuum? Richard Knight at Colorado State University has done analyses and has collected other peoples' analyses of sediment, diversity, and habitat in the West. He says the worst, most degraded ranch is better than the best subdivision in terms of anything we could call the environment. I do not know whether that is true or false. But when we do economic accounting, or when we displace one economy to bring in another economy that is supposed to make things great, it is more complicated than we think.

My initial reaction to Michael Fischer is that I will never forget his phrase, "people of pallor," but my other reaction was to his comments about Rush Limbaugh. I think Rush is one of the smartest white men that I have ever heard. The reason I listen to him—despite the fact that he puts my teeth on edge and I find him obnoxious in many ways—is that he has one incredible strength. He can go right for my weakest point, and he understands where people like me (sort of elitist, liberal, environmentalist) are vulnerable. I listen to him for criticisms, for perspectives on myself that I would never have otherwise. I loved when George Bush lost his bid to be reelected President. Then I listened to Rush closely. He could not make use of, he would not truly listen to, the people like me who were calling in to tell him why Bush lost. So I feel like, at least, I have one up on Rush Limbaugh.

The multi-ethnic, multicultural issue that Michael Fischer raised is fascinating. I spent a year at Stanford University, and I found that the institution was clearly multi-ethnic and multi-gender, but it was uni-culture. Everyone at Stanford, it seemed to me, came from the same background. If they were not already upper-middle class, that is where they were heading. Stanford is a university which produces self-confident, ambitious, upper-middle class, ruling class people. I find the West, especially western Colorado, much more diverse with greater opportunities to cross cultural lines. That is a major challenge in my life. There are Native American and Hispanic com-

munities, but also immense barriers between groups of white males, for instance.

I mentioned the Oregon ranchers this morning. What struck me about those men and women (they operate as couples and the ranching community has brought its women to the front lines) was the enormous pain they must have experienced in crossing over and reaching out to people like me. They abandoned their fortress, which is something I am not sure I have ever done. I admired and was awed by their ability to do that. They did it because their backs are to the wall and it was either go under as so many have chosen to do, or reach out and change and survive. My back is not to the wall at this point.

I was reminded of those ranchers' courage in listening to James Matson of Kaibab Forest Products Company. He was good enough to leave his talk for me so that when I got here last night I could read it. I only read half of it because in the first half, when he posed his series of questions and talked about the importance of wood, I read the message as "there is better living through wood," and I thought I did not have to read the whole paper. I did not know that at the end, he would say that he was willing to reach out, to accept other values as legitimate, to ask the land-grant universities to research what the original forests were like, and to figure out how to manage those forests to produce commonly agreed upon goals. Of everything I heard today, I can hardly believe that his was the closest to my vision of the West. If there is pain in my life, it comes from having to abandon my preservationist view of the West, because it was such a simple vision, but not one that can work.

I think I heard James Matson talking about an internalization of the larger society's values, and that was what I heard from some of the ranchers. Only through that internalization can the West work. It cannot work if imposed from without through regulation and bureaucratic muscle. The reason these are such terribly difficult times is that we are trying to internalize those values. We are trying to convince each other, to co-opt each other, to see the world from others' points of view, and to get others to see our point of view. We should not feel hopeless; this is the time of maximum confusion and maximum pain.

With regard to George Reiger, I think he put the blame in the wrong place. I think bureaucratic failure mirrors social failure. There is no consensus among us, therefore natural resources managers get mixed signals and go in many different directions. No one likes to be beat on and no one likes to be beat on from several directions. Once we understand what we want, once there is consensus among independent, private sector people, then we will find that we have a marvelously talented managerial group that can give us exactly what we want if we know what we want. I do not see privatization as a solution. It is

a solution, but I do not think it is a solution for the West. The heart of the West is its public lands. The challenge for us as a society, and it will make or break us, is whether or not we can come together and manage those public lands. If we cannot, we fail as a society and we will continue to have endless conflict. If we can, we have a treasure that is beyond any possible imagining.

George Reiger performed another function: he challenged the idea of ecosystem management. I want to present what I think of as ecosystem management. My idea of ecosystem management is both private and public land-based and comes from an example by Sid Goodlow. Sid is a rancher in southern New Mexico who is about fifty years old. His ranch is on the Smokey the Bear District of the Lincoln National Forest, about 80 miles north of Ruidoso, New Mexico. About 30 years ago, Sid bought 3,600 acres of piñon-juniper uplands. The land had no live streams on it, was pretty much covered with piñon-junipers, and was barely able to support, according to Sid, seventy starving mother cows with their calves. He said he knew it was not very good land, but it was all he could afford.

Sid wanted to know where the corners of his property were so he would know what land belonged to the Bureau of Land Management below his place and what land belonged to the Lincoln National Forest above his place. So Sid began looking for the monuments that marked the corners. To aid his search, he read the original surveyor's notes. He found that the original surveyor's notes said, "No trees for 100 chains" (surveyors measure distances in chains). So they set a rock cairn and when Sid found that cairn a century later, it was always hidden in a dense piñon-juniper forest. At one time there was an Indian village on Sid's land. Native Americans were long gone, but they had left petroglyphs showing pictures of fish jumping and beavers gnawing on willows and aspens. Sid put two and two together, and decided that originally his ranch was a savannah; there were piñon-juniper trees in fire-resistant, rocky areas, but basically the land was open grasslands with year-round streams instead of the eroding gullies on his land.

Sid spent thirty years recreating the savannah. He bought a wood corer to determine the age of the trees. He would core the trees and any tree that was pre-European settlement, he left. Any tree that was younger, he took out. I visited his ranch in Fall 1992 and he had running streams, year-round running streams. His downstream neighbors are really mad at him because they used to get a spring rush of irrigation water off the uplands, and now that water is absorbed by his land. Downstream neighbors get a live stream all year, but they do not get the spring flood waters that they once used as irrigation water.

Sid bought a little portable saw that he hauls behind a jeep up to the Lincoln National Forest where he is beginning to cut wood. Because of fire suppression and loggers cutting the big Ponderosa pines, there are thousands of small trees but no big ones. You cannot set a fire there because it would turn into an inferno. Sid is going in and selling *vegas* for adobe houses and firewood from trees he is cutting in an attempt to get the wood volume low enough so they can reintroduce burning. He is doing this cooperatively with the Smokey Bear District, which is amusing and ironic because this is the place where, after the Forest Service had already created Smokey Bear, a little burned cub was found, rescued and nursed back to life. In honor of that event, the district changed its name to Smokey Bear.

Sid is also burning on his grasslands to control the piñon-juniper. He has also reintroduced wild turkeys because he says they fluff up the fallen pine needles so fires burn cooler. According to Sid, without turkeys, fires would not spread until you get loading of fuel to the point the whole area would go up in flames. Sid also makes money from some hunting cabins he has there and he now has 130 fat cows with their calves. When I visited, they had just had five years of drought. This is only an outline; I have not done Sid's view of that ecosystem justice.

This example is my idea of ecosystem management. While it has been implemented by a private person on private land, it also has been implemented with the help of a government agency. The agency personnel were amenable to Sid's efforts. I wanted to tell Sid's story so that we would have at least one example of what ecosystem management might be.

I want to close with a personal note about my visit to Sid's ranch. When I arrived, after driving 150 miles through a piñon-juniper desert—at least that is how I had begun thinking about that forest—Sid was there along with a retired rancher in his 70s and Sid's son-in-law. Sid had had a \$30,000 back operation because the work of clearing his land had destroyed his back and it had to be rebuilt. Those three men were standing around a brushhog. A brushhog is a rotary lawnmower blown up about 500 times. They wanted to lift it into the back of a pickup truck. That is how ranchers do things. I was to be the fourth corner. So we all lifted, Sid with a bad back and a seventy-year-old man, and their three corners go up while my corner stays on the ground. They said, "Oh, you have the heavy corner," being really gracious. We figured out a different way to get it into the pickup truck.

Jerry Hopkins and Daniel Sugerman wrote a biography about Jim Morrison entitled *No One Here Gets Out Alive*. The lesson I drew from that experience is that we do not even get half way out of here

undamaged. Sid lost his back, and I sit at a desk and am not the vigorous person I could be. That is the story of the West. We should not be too demanding.

We should not expect too much except to hope for community and cooperation and understanding.

Reclaiming the Commons of Public Trust

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Abstract

Perpetual conflict over natural resources has eroded the public trust needed to sustain civil institutions and the ecosystems they affect. Battle has become more virtuous than compromise for the common good, and regulatory mends of the frayed social fabric have further fragmented capacities to handle ecosystems in productively unified ways. Escapes from the impasse sound fairly simple: willingness to respect one another, to listen, to innovate, to trade, and to work toward mutually beneficial futures.

CONFLICT, CIVILITY, AND HUMAN DIGNITY

Natural resources conflicts, like competition in the marketplace, presumably sharpen our sense of public values and the actions needed to sustain them; but conflict has become so prominent and stylized a feature of natural resources management as to have become an end in itself, a consumer good that seems to benefit people with or without resolution. It has become so controlling that it erodes the trust and the security required for care of the resources themselves, tearing the social fabric within which people have reason to resolve their differences in deference to one another and to the future. Ethics of civility have given ground to a morality of selfness, creating a tragedy of the commons of trust upon which people can advance their mutual interests. The result is destruction of natural resources for all, whatever their persuasion.

Our discourse has fallen to the seduction of stereotypes, big boxes easily emptied of human virtue. We have grown comfortable with a culture of blame—the other guy is always the problem—and we have developed habits of response to problems that may be satisfying emotionally but that have the opposite

effects we say we expect. If *the other guy* is less than *we* and is the problem, then it is right to kick or control or debase him into line, whatever the real consequences. Indeed, resolution has gained an unsavory tinge, a compromise with evil, even when its real consequences would improve conditions for all.

These simplifications of discourse confine our vision; they reduce our capacities to find better paths. In a fundamental way, they undercut personal dignity and the dignity of our public processes. The decline of our natural resources reflects the decline in our civility.

The objective situation is more complex, more interesting, and more hopeful than contemporary public discourse may lead us to appreciate. The situation is not formed by grand moral arguments, nor even by abstract distributions of political and economic power, but by the acts of millions of persons who do what they do for unique and virtuous reasons and within the unique possibilities of their place. Our public interests are served not by judging what they do but by expanding their opportunities to do otherwise. We need public means to respond more effectively to diverse interests and possibilities and to thereby strengthen reasons for civil commitment to interests of the public at large.

This paper was presented as the introduction to the second day of the symposium. *Ed.*

REALITIES RATHER THAN MORAL ISSUES

Efforts toward resolution are challenged by two inherent tensions in our system of resource governance. The first tension arises from the disparities between our integrative concepts of ecosystem and the many specialized institutions that happen to converge in and guide our uses of a particular place. The second tension arises from the disparities among public interests as defined, legitimately and differently, at the various levels of governance in our federal and market systems. We often attempt to wish these tensions away, e.g., by advocating pure ecosystem- or property-based governance and pure central or local control; but the tensions reflect the strengths as well as the inconsistencies in our system of governance. Simple responses to them may cause more problems than they solve. We need balanced responses and, more important, the capacity to modify them for different conditions over space and time. The tensions mark where adaptive processes are most critical.

ECOSYSTEM INTEGRITY VS. INSTITUTIONAL DIVERGENCE

In many parts of Asia, traditional systems of forest management have sustained locally desired forest qualities and diverse subsistence outputs for centuries. When national forestry agencies later began to implement sustained yield plans for timber in the same place, the forest disappeared. Discourse about this forest degradation is filled with comment about greed, corruption, oppression, ignorance, and irresponsibility; but these hide the fundamental fact: when two sustained yield plans are both applied in the same place, the forest will be destroyed unless the two plans accommodate each other. The plans represent different constituencies, powers, capacities, and interests. They imply different perceptions of the forest, its growth and its benefits. If played to the full, neither accounting for the other's take, the two together will leave little or nothing behind.

American analogies are ubiquitous. The tension between plans to sustain endangered species and to sustain timber- or range-based economies is a pressing example. The plans do not represent different moral qualities: they express different arrays of legitimate interests and institutions in which we all share. The differences can be viewed as a strength rather than as a problem. The problem arises in the absence of means for accommodation.

Another example is the tension between sustained yield plans and timber targets for the same national forests. We generally accept the virtues of both professional and political systems of forest control: the issue is not whether one is innately superior to

the other. Our problem is the absence of a means to resolve consequences on the ground to serve the values that both systems represent.

The watershed is perhaps the classic example of this issue in the American West. Almost everyone shares the idea of the ecological interdependence among activities occurring in the same river system. The watershed fits our central concept for perceptions of ecological unity and its management; but our institutions—custom, law, market, politics, governance—slice up and fragment a watershed, usually in ways that are unique to each site within it. Different institutions apply to, for example, water, land, wildlife, forage, timber, and minerals. These institutions distribute, condition, protect, and value claims to elements of a presumably unitary system through independent processes that have different histories, rationales, scales, and controls. The institutions just happen to overlap in a region that shares the same water flow. While we may be tempted by unified controls that would satisfy the needs of a particular place, these institutions are too fundamental and functional to be dominated or dissolved. The more productive course is to find means that better accommodate common watershed interests within the conditions these institutional realities create.

SCALE, POWER, AND JURISDICTION

As the examples suggest, a piece of land is overlain with institutional layers that typically are governed by different levels and agencies of political jurisdiction. The results can be devastating. Farming in America, for example, is regulated and otherwise influenced by many different county, state, and federal authorities, each with its own political constituency and specialized objective. While not one of them is directly intended to reduce agricultural viability and the open space it secures, their collective impact makes farming inviable in many places. The consequence of control is inconsistent with a widely shared public interest. It can be argued that the management of federal forestlands is caught in a similar bind. Layers of specialized legal requirements can seem to render almost any choice illegal in some sense; every choice erodes the legitimacy and viability of the management system.

Other examples are more profound. Federal timber harvests affect market prices and consequent private harvest rates and pressures on state regulatory systems; state forest-practice regulations affect the pressures of claims on federal resources; state and federal forest policies together affect county economies and locally controlled patterns of forest conversion for settlement. Federal and local land management decisions affect state-jurisdiction water and wildlife resources, the movements of which

rarely respect jurisdictional fence lines; and market forces shape opportunities in ways that do not acknowledge the needs of people or ecosystems in any particular place.

Such problems are inherent in our federal system of representative democracy and in our relatively free market economy. Our complex of institutions encourages aggregations of diverse values to such an extent that the same person is likely to express competing preferences when voting in local, state, national, and international market arenas. If left unresolved, the large conflicts that arise undercut the basis for long-term beneficial resource management; they reduce motives and capacities to invest in the future. The challenge is not to overturn our fundamental systems and sacrifice their virtues but to find new modes of accommodation that will speed resolutions of the problems they create.

TOWARD A CIVIL FABRIC

Accommodation is not a notable attribute of our approach to natural resources issues however. We have become trapped as a society in reflexes and stereotypes that exclude possibilities for accommodation among diverse interests. Moralism has become a too-accepted substitute for thought and civil respect. Can we move beyond the-other-guy excuses for inflexibility toward a capacity to use differences for mutual benefit? I believe so because the following possibilities seem attainable.

MOVING BEYOND STEREOTYPES

When we stuff people into abstract boxes, such as *environmentalist* and *industry*, we forfeit the capacity to appreciate individual virtues and circumstances; but the fate of our common interest is shaped by the actions of millions of unique persons, each of whom has good reason for doing what he or she does. Where people have sought to know their adversaries in real human terms—a process that is occurring in several communities in Northern California—they have come to see a whole range of possibilities about which reliance on stereotypes had blinded them. Stereotypes destroy civility by depriving people of their dignity. The future—our natural resources, our children—suffers from the results. Simple respect takes us a long way toward new resolutions.

TURNING THE WHEEL OF POLITICAL DISCOURSE

When we get stuck on a particular we/they structuring of an issue, a slightly different perception can

free up the vast possibilities otherwise buried in these blocks. The Forest Summit¹ accomplished such a turn of the wheel by focusing on communities and fisheries rather than on the environment/industry structure that had confined discourse so unproductively for so long. Our opportunities looked fresh through that focus. In local and state wranglings about timber issues, I have never heard the word *children*. One suspects the political possibilities would be greater if the wheel were turned just that small bit. The we/they of political habit typically ignores those without voice, so we should not be surprised at the wealth of possibilities released when old walls are toppled.

BREAKING HABITS OF RESPONSE

We have become attached to particular means of control rather than to the ends they are presumed to achieve. In forest debates, for example, some people go inevitably for stronger regulation, even when more regulation will destroy the viability of what they wish to preserve. Others rely on quasi-feudal notions of property, even when doing so is destroying their forests and futures. Bashing the other guy destroys his ability and willingness to serve your interests. Such habits are at the expense of mixed approaches that would work for everyone if given a chance.

The "flip test" is a useful way to better understand the possibilities in such situations. What does an environmental restriction look like when viewed instead as an economic policy? What does an economic program look like when its environmental consequences are evaluated? The results usually are quite unexpected. In a significant range of conditions, an environmental restriction can produce greater economic benefits than would the economic program; and the economic program would have more beneficial environmental effects than will the restriction intended to achieve them. We need mixtures that suit real conditions and that accomplish mutually desired ends. These mixtures can be found when we focus on what particular policies do rather than on which political identities they are thought to serve.

SACRIFICING THE PLEASURES OF BATTLE FOR THE BENEFITS OF SETTLEMENT

The pleasures of combat often seem preferred to the concession of a mutual interest, even when the

¹The Forest Summit was held on April 2, 1993, in Portland, Oregon. Convened by President Clinton, the summit's objective was to gather information on the debate over ecosystem protection and timber harvests in the Pacific Northwest to guide federal efforts to devise a balanced solution that preserves both ecosystems and jobs. *Ed.*

mutual interest is overpowering. In California, environmental and industrial interests lay locked in battle over forest practices even as urbanization is breaking the forest and destroying the streams more rapidly than anything happening inside the forest itself. Both sides are going down together.

The 180-degree principle applies in such situations. Contrary to Satchel Paige's "Don't look back. Something may be gaining on you," the 180-degree principle suggests that you had better look back because the common threat is gaining on both of you. In natural resources issues, the causes of problems are rarely located where the consequences occur, so battles over consequences tend to neutralize the interests with the intensity to protect against forces that are carving up common ground.

FINDING OPPORTUNITIES FOR TRADE

Advocates of free markets and of cooperative enterprise share a common belief in the bounties of mutually beneficial exchange, yet the realm of natural resources management contains few lasting examples of efforts to enhance negotiation and trade among diverse interests. Jurisdictional definitions of natural resources issues may be part of the problem, reflecting the durability of territorial-relative-to-functional criteria for distributions of power and authority. This tendency casts most debates in the form of contending rights and throws most negotiations into the sphere of the courts. The use of special cases to resolve grand policy creates its own problems, not the least of which is the erosion of trust in the judicial system. We have been extraordinarily slow to create alternative modes of trade that can achieve more desirable outcomes and greater flexibility than is possible when solutions must be sought at extreme levels of power.

The growth of trade in water suggests broader possibilities. Principles of trade are beginning to be applied in watersheds between upstream and downstream interests, in the reservation of riparian and wildlife-habitat systems, in forest stewardship agreements, and in biodiversity councils. These demonstrate means to resolve problems on practical grounds in flexible ways for diverse conditions. They strengthen arguments for more general relief of jurisdictional constraints on opportunities for similar endeavors.

Such endeavors first show their potential viability at local levels. They create cases, not for the courts but for legislative and administrative entities that may come to appreciate the efficiencies attainable through trading regimes for essentially public purposes. Those locked in combat seem to have common interests in experimenting with regimes to increase adaptability in their own circumstances.

INNOVATION

Ideas are the initial currency of new exchanges if the parties are receptive to them. The movement of ideas is not a feature of our persistent resource conflicts. Whether this is due to the absence of a good idea or of receptiveness to it is difficult to judge: the difference between clever stonewalling and simple incapacity is less discernible than it once seemed to be. Both undermine credibility and trust, so perhaps the distinction is unimportant.

Resource scientists and professionals should be a reliable source of and seedbed for fresh and useful ideas: that is their primary claim to special privilege and support. Unfortunately, their established organizations—experiment stations, professional societies, resource agencies—seem more devoted to self-protection than to the growth of ideas or to inclusion of the vibrant nonestablishment talents expanding beyond their bounds. As with natural resources issues in the policy arena, resource topics no longer are the possessions of detached specialties. They have become mainstream scientific and managerial interests that attract the best talents from all fields. Building inclusive flows of ideas among all interested scientists and professionals is no less challenging an innovation than doing so among conflicting parties on the ground. Indeed, a reluctance or incapacity to do so seems less justifiable in organizations whose principal reason for existence is innovation.

PUBLIC SCIENCE TO ADVANCE DISCOURSE RATHER THAN TO PRODUCE FACTS

Resource scientists currently are enjoying the policy limelight as sources of third-party expertise whose presumably objective knowledge provides concrete answers in the amorphous swirl of political conflict. The mix of public deference and antagonism in descriptors of the role—gangs, task forces, teams—should warn us of the transitory nature of this new noblesse. Reliance on resource scientists could quickly dissolve in the crucible of worldly trials. If public science is to survive to serve another day, the circumstances require more rather than less commitment to the conventions of scientific modesty, clarity, and scepticism.

Good public science simplifies and clarifies complex problems without interjecting invisible values. The durable contributions of science in conflict resolution are in how scientists explain problems rather than in what they conclude about them. This need to explain requires a capacity among scientists to illuminate, to themselves and to the public, the contents of the underlying assumptions that determine the answers they produce to a public question. If scientists treat their models as neutral machines, they

probably do not see the quasi-policy impacts of their own designs.

When opened to full light, scientific models can enrich public discourse about the dynamics of a problem and about how different values affect our choices of solutions. People who agree to disagree on assumptions but accept an envelope of reasonable possibilities have substantially reduced their differences and increased their common ground. Scientists face a great challenge to convert models from black-box machines to accessible processes of thought that help everyone to find better answers.

ACCOMPLISHMENT AND OPPORTUNITY

These possibilities are but one person's cut at the central problem. Our natural resources are declining because we as a society are not investing in them sufficiently to compensate for the growing claims they are expected to satisfy. The social context is too insecure, too mistrustful, too taken to the pleasures

of battle. The crisis of public trust is our true tragic commons, encouraging a politics of grab that our natural resources cannot support. We should accept responsibility for this situation and work to overcome it. This effort to change requires commitment to rebuild a culture of civility, a culture that dignifies each person. People are more likely to treat natural resources differently and to take a longer view of resource issues when they feel that they are part of a society that values their views and their needs.

We are making progress. Localized achievements abound across America. We need to learn why they happen and how opportunities for them can grow. We need to show respect for differences that reveal mutual interests, and we need to discover the means to pursue them successfully. We need to explore active conflicts that challenge us to understand why they remain unresolved and how they might be settled. We need to search for means to expand opportune conditions for settlement thus far attained in particularly conducive situations. We need to suggest new pathways through the problem. Let us see where those pathways lead.

Working Together in New England

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Abstract

Much can be learned from community-based environmental protection efforts in New England. The region's rural character, mixed ownerships, and resource-dependent communities provide a wealth of innovative examples of merging diverse interests toward a common goal. In many cases, the key to success is listening to local constituents and interests and fostering local trust and mutual respect. In Vermont, this has most often been realized through public/private partnerships on the local level.

INTRODUCTION

The town meeting in New England is alive and well. But the town meeting as a form of government is really quite different from what some of our national politicians, like President Bill Clinton and others, have recently used. In New England, town meetings are gatherings where the town folks get together annually and elect city officials, develop the new year's budget, deal with ordinances, and address the myriad issues of local self-governance. In short, town meetings represent how small communities are run.

Every community in Vermont has its town meeting on the same day each year. In Bristol, Vermont, the town meeting held last March was relatively uneventful.¹ To the north, the town of Woodbury passed its town budget of about \$250,000 after debating many issues and finally rejecting a \$2,500 proposal for road signs. Apparently the locals already knew where everything was.

South Royalton spent considerable time debating a ban on nude dancing. South Royalton is the home of Vermont Law School, and someone pointed out that a constitutional challenge to the ban might turn out to be quite expensive for the town. Finally, the bar owner whose proposal had sparked the ban withdrew his plan. The town rejected the ban rather than risk a lawsuit.

Jerry Greenfield lost the selectmen's race in

Williston. Jerry and his business partner, Ben Cowen, have done very well in the ice-cream business. But it seems that Jerry's skills were not good enough for the people of Williston.

Town meetings are an old tradition in New England, and they really work. One reason they work is that people are free to argue about issues—sometimes really having it out—but they respect each other in the process because tomorrow they will again meet their friends and various townspeople on the street, at the general store, and at the local gas station. Civility exists because they all must continue to live together.

Ed Marston's romantic description of the unspoiled and wide-open West was really about the rural West—not about Salt Lake City or Phoenix or Denver or Las Vegas²—and rural is how one might describe Vermont as well. Vermont is small: its six million acres are home to only a half million people, most of whom live in small towns. The state has a diversified economy, yet there are not many jobs to go around. While Vermont has missed the economic booms of the past, it also seems to miss the busts that inevitably follow.

Vermont is a state where things are quite personal. Frank Sesno, the TV commentator, is a graduate of Middlebury College. He was at Middlebury in early 1993 as an expert alumnus returning to counsel

This paper was transcribed from an audiotape of the presentation given during the symposium. *Ed.*

¹The author's references are to meetings held in 1993. *Ed.*

²See Marston, this volume, page 1

students and to present seminars. One interesting comment he made about the media was that if media professionals do not relate to people they are out of business. His contention that relating to people is important applies not only to the media but to land and resource issues as well.

Moving beyond conflict to resolve resource issues requires working together. As obvious as that sounds, it often does not seem to work that way. Natural resource managers have not been doing a very good job of bringing people together. Local action, wherever possible, is the key to success.

COOPERATIVE MANAGEMENT IN THE EASTERN NATIONAL FORESTS

Many Eastern national forests provide a good example of community-based decision-making. Some eighty years ago, land and resource problems in the Eastern United States led to the passage of the Weeks Act and, subsequently, to the creation of many of our Eastern national forests. The White Mountain National Forest was one of the very first national forests established and, quite expectedly, the locals had a very paternalistic view of the forest right from the beginning. Ever since, forest managers have had to figure out how to get along with local interests to survive.

This paternalistic view is widespread in the East. For example, the Finger Lakes National Forest, covering just 13,000 acres, was established in 1983. Before that, it was a land-use area—a result of the Bankhead-Jones Act of the dust-bowl days when the federal government acquired and managed bankrupt farms. Early in the Reagan administration, some of these areas were declared surplus. But local people near the Finger Lakes valued this public resource, which had been managed as national forest for twenty years, and fought to keep it that way. Trying to preserve the area, they contacted Frank Horton, their local representative and the ranking member of the New York congressional delegation. Within a few weeks Congress passed an act that created the Finger Lakes National Forest.

CASE STUDIES IN NEW ENGLAND RESOURCE PROTECTION

The following case studies present some interesting, relevant factors, illuminating the importance of relating to people and achieving goals at the local level through community action.

GREEN MOUNTAIN NATIONAL FOREST

Green Mountain National Forest is about one-third of a million acres and growing. Approximately 50,000 acres have been acquired over the last decade. The forest has a good multiple-use program, including an active timber program featuring high-quality hardwood species. But the focus of the forest, and the main reason people want it there, is to protect the Green Mountain Range as a visual backdrop and area for dispersed recreation. The timber program serves only as a framework for the more important issues of recreation, fishing, watershed protection, and wildlife.

The mid 1980s were a contentious time for many national forests, and during this time the land management plan for the Green Mountain National Forest was developed. The process began by going around and meeting with people. Several groups and planning commissions held meetings. We let it be known wherever we could that if someone wanted to visit with us, we would take the time to do so. We had much one-on-one contact with people we knew from previous debates over the Vermont Wilderness Bill, where we had encountered controversy over timber sales and wind-powered generation. Based on those meetings, we developed a picture of what the forest should ultimately be like in the views of local people. This was done before we even got started planning, and we called this description our roles statement. It was really a vision statement, but in it we recognized that public land is scarce in Vermont, comprising only 11 percent of the state, half of which is national forest.

Starting from that philosophy, we concentrated on working with interested people on both local and state levels. The national groups were often on the periphery. Sometimes they took different views. Mostly we let the local groups work it out with their national counterparts.

On the Green Mountain forest, we worked together at the local level quite well. But this is not always the case in such endeavors. For example, the White Mountain National Forest in New Hampshire encountered bitter controversy with national interest groups over the New Hampshire Wilderness Bill. There, the Forest Service, along with a coalition of local groups that included timber interests, snowmobilers, hikers, and preservationists, had gotten together and worked out a wilderness bill that was satisfactory to all. Then a representative of a national organization came in and did not like what was happening. The representative stormed out of a meeting claiming that no wilderness bill had ever passed without his group's approval. Fortunately, that is no longer true, because in New Hampshire, people working together and with their delegations

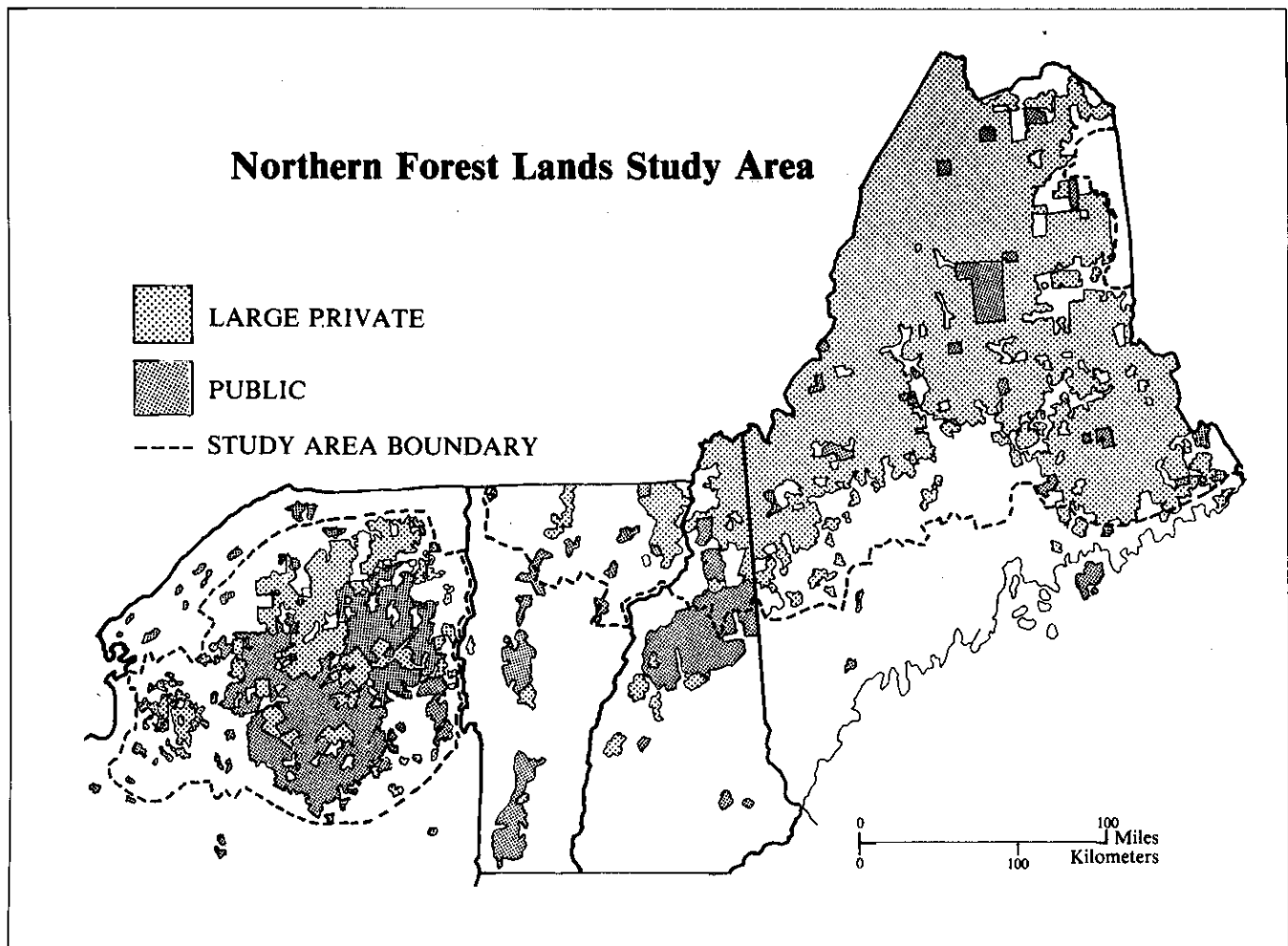


Figure 1

successfully developed a wilderness bill that works for local interests.

The Vermont Wilderness Bill, developed in much the same way, made about 20 percent of the Green Mountain forest either wilderness or national recreation area. One portion of the forest had characteristics that just did not fit into the wilderness model, so it was designated as a national recreation area—a term used very loosely and one that is redefined case by case. This area served more than just recreation; it was an important wildlife area that required some vegetative manipulation that, given the circumstances, was acceptable to all.

Congress directed us to develop a specific management plan for the area. To do this, we assembled many of the same people who helped with the wilderness bill and developed a plan for the White Rocks National Recreation Area. During our meetings, someone suggested reintroducing the pine marten, which had been extirpated from Vermont many years before. We said, “Why not,” and worked with universities and the Vermont Department of Fish and

Wildlife to reestablish the species. Today, we have a viable, secure population of pine marten in that part of the national forest. It was truly a win/win situation. Even the Vermont Trappers Association, which was a part of the study team, supported the idea and agreed to curtail trapping in the area until the species was established.

THE NORTHERN FOREST LANDS STUDY

The Northern Forest stretches 500 miles from Lake Ontario to the St. Croix River on the Maine/New Brunswick border and encompasses a remote region of boreal and northern hardwood forests, with a scattering of small towns (Figure 1).

About 85 percent of the region’s land is privately owned, more than half of which is controlled by national corporations. These corporations are typically managed by people who are not natural resource specialists but who are accountants and attorneys who live in places like Stamford, Connecticut, and New York City. In 1982 a European financier

named James Goldsmith launched a hostile takeover of the Diamond International paper company. Goldsmith immediately sold the paper-manufacturing facilities and in 1988 put more than one million acres of land up for sale. The acquisition and demise of Diamond International caused widespread concern because several studies indicated that development pressures in New England threatened the region's traditional patterns of land use and that the familiar landscape of the region was beginning to unravel.

About this time, the governors of Maine, New Hampshire, Vermont, and New York formed a governors' task force to study ownership and land-use patterns in the Northern Forest. The task force was comprised of three people from each state, representing landowners and the timber industry, state government, and conservationists. Simultaneously, Senators Patrick Leahy (D-Vermont) and Warren Rudman (R-New Hampshire) were instrumental in starting a companion effort headed by the U.S. Department of Agriculture Forest Service, and the senators ensured that the Forest Service appropriation bill contained the necessary funds to conduct the study. The Forest Service's charge was to assist the governors' task force and to develop alternative protection strategies that could be used to maintain the traditional land uses of the region.

By this time, many people felt that a different approach to land conservation was appropriate since the idea of directly purchasing new national forest or parklands was not feasible given the cost. However, simply leaving land-use decisions up to market forces was not working either, given the enormous pressures for resort development and corporate takeovers. A new approach based upon some kind of public/private partnership was needed.

With considerable public involvement, a vision statement was written, describing what New Englanders wanted the Northern Forest to be like in the future. The Northern Forest Lands Study report did not recommend any specific protection strategy but listed an array of alternatives. The governors' task force offered its own report to the governors, and it included some recommendations. This weak document, with no mention of "greenlining," was largely designed to keep the state of Maine involved in the process, which was important since Maine comprises a large portion of the region.

Following the release of the reports, the Northern Forest Council was established by the 1990 farm bill. The council does not have a very strong charge. The Northern Forests Lands Act, proposed in 1991, would have provided stronger direction, but during hearings in Vermont and New Hampshire, the wise-use and private-rights groups came out in force against the act. The Northern Forests Alliance, a coalition of about twenty-five conservation groups, is also in-

involved in trying to reach resolution, but the idea of a regional solution is still a long way off.

Nevertheless, there have been some real benefits from the process. Local people are moving ahead, and the process has been very educational. For example, the Forest Legacy Program, which is a federal program that assists in the buying of land easements, was included in the 1990 farm bill. In Granby, Vermont, the town got together with the state, the Forest Legacy Program, and some nonprofit organizations and purchased Cow Mountain Pond from Champion International, a forest-products company that has been very good to work with. Today, the lake is set aside for the enjoyment of future generations.

Another example of cooperative environmental protection involves four conservation groups, two states, and the U.S. Fish and Wildlife Service working with the James River Corporation and Boise Cascade, two timber companies, to establish a new national wildlife refuge on Lake Umbagog near the border of New Hampshire and Maine. These developments represent some great accomplishments, and moderate conservationists are increasingly supporting environmental causes within such cooperative arrangements.

The Countryside Institute's professional exchange program is an excellent example of another successful project. The program began in 1987 as an exchange of professionals between the United Kingdom and the northeastern United States. It has since grown into a collaborative effort that includes two federal agencies, one university, and five nonprofit organizations. The purpose is to share ideas and to increase awareness among the various groups and individuals involved.

The program uses a case-study format with eight professionals—four from either side of the Atlantic. The group meets and visits a community that has invited it and spends a week to ten days talking about resource and land-use problems. The format is very open, and the group does not go into a community unless it agrees to get all players involved. Some good success has resulted from this process. In one case, a community stewardship program involving ten private organizations, five public organizations, and a coalition of local businesses is developing a resource protection strategy that covers three Adirondack communities and involves all stakeholders.

CONCLUSION

Education is the most important element in garnering public interest in natural resource issues. Citizens must be enlightened, starting with environmental education for youngsters and adults. The

media are very important as well since they provide information and can help to maintain a high level of openness and fairness in the process.

In addition, the smaller the geographic area, the more likely it is that potential solutions can be found. The successes of the examples above seem to center on working at the local level. Issues are more easily resolved in individual towns or groups of towns rather than at the state level. There is too much opportunity for polarization if states attempt to work together as a region, and the idea of the federal government entering the fray to resolve land-use issues appalls people as well. Multistate organizations, corporations, or environmental groups also do not do a very good job of relating to local people and may impede the process of arriving at a resolution.

Despite these caveats, there are obviously some issues that require national direction—controlling air pollution, protecting threatened and endangered species, establishing nationally significant places, and many others. A community working together,

whether that community is just one town or a localized area encompassing several towns, can accomplish much. All of the stakeholders need to be involved, and they need to agree on the facts and to define the issues. This process takes more than one meeting. The group must continue to meet together to build trust and to frame a common vision, which should include economic, social, and environmental elements because they are all interrelated. One element cannot be effectively dealt with without including the others.

Once a common vision is established, the group needs to work together to outline a process to achieve the vision and to define roles for the different players and organizations. In Vermont, the focus is on building coalitions at different levels of government that include private interests and for-profit and not-for-profit organizations. The resolutions that are most effective are local ones in which everyone is a part of the process and in which all agree with the result.

The Pinelands National Reserve: An Experiment in Land Management

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Abstract

The Pinelands National Reserve covers roughly one-quarter of the state of New Jersey. Created in 1978, the reserve represents one of the most innovative regional planning efforts in the nation. The Pinelands plan has effectively achieved the goals set forth in federal and state legislation by successfully maintaining the Pinelands environment through a system of land-use governance involving multilevel jurisdictions. Much of this successful maintenance has been accomplished by channeling development away from ecologically sensitive regions of the Pinelands into existing designated growth areas.

INTRODUCTION

The Pinelands of New Jersey consists of 1.1 million acres of pine, pine-oak, and oak-pine forests on the Outer Coastal Plain (Figure 1). It comprises 22 percent of the state's land area and is within portions of seven counties and fifty-three municipalities. While the Pinelands comprises a significant portion of the most urbanized state in the nation, the region remains sparsely developed today. It is the largest body of open space between Richmond and Boston on the Atlantic seaboard.

The Pinelands was designated the country's first national reserve in 1978 and was classified as an international biosphere reserve by the United Nations Educational, Scientific, and Cultural Organization in 1983. Approximately two-thirds of the region is in private ownership and one-third in parks, forests, and wildlife-management areas owned by federal, state, county, and municipal governments. The area currently serves as the locale of a case study on ecological sustainability that is being conducted under the auspices of the U.S. Man and the Biosphere Program.

THE RESOURCES AND LANDSCAPE INFLUENCES

The natural and scenic resources of the Pinelands are an anomaly in the megalopolis of the Northeast. The area is a patchwork of forests, rivers, farms, small towns, and even smaller hamlets. Beneath the sandy and nutrient-poor soils is the 17-trillion gallon Cohansey Aquifer, one of the purest water supplies in the nation. Here, there exist more than 12,000 acres of a unique pygmy forest of dwarf pine and oak, where all who visit appear Bunyanesque. A variety of rare plants and animals, including the curly grass fern and the Pine Barrens treefrog, find suitable habitat, and numerous plants reach the farthest point of their northern or southern range at this juncture. One-half of New Jersey's freshwater wetlands are located within the national reserve, and these provide habitat for 80 percent of the rare and endangered plant and animal species found here.

Many factors have shaped the Pinelands environment. Fire has been a major landscape influence. In 1992 in just a three-week period, over 16,500 acres burned until finally suppressed. Forestry and agri-

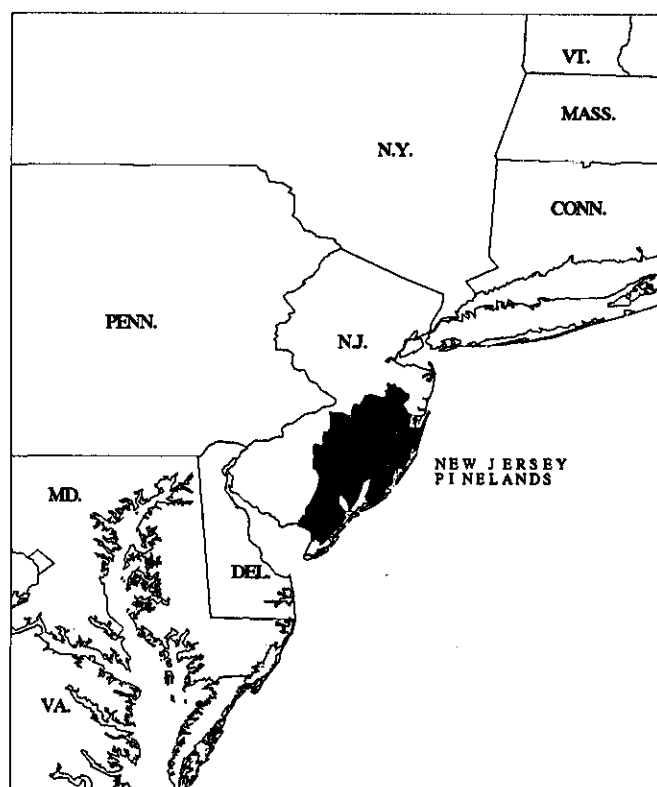


Figure 1. The Pinelands National Reserve. Map redrawn by Nathan Bentley from a map by Tina Campbell in *Protecting the New Jersey Pinelands*, Beryl Robichaud Collins and Emily W. B. Tussell, eds. Copyright © 1988 by Rutgers, The State University. Used with permission of Rutgers University Press.

culture also have shaped the existing environment. During the eighteenth and nineteenth centuries, entire forests were cut to fuel the furnaces and forges of an active bog-iron industry, as well as for glassmaking and shipbuilding. Conventional agricultural activities in the region contributed greatly to New Jersey's reputation as the Garden State. Specialty crops, particularly blueberries and cranberries, remain moneymakers for a small group of long-time Pinelands families. Here, the hybrid blueberry was cultivated by Elizabeth White and Dr. Frederick Coville at Whitesbog in Pemberton Township. New Jersey continues to rank among the top three states in the nation each year in the production of these two crops.

Since the turn of the century, and increasingly between 1960 and 1970, development began to shape the land in a manner never before experienced. Suburbanization spread from Philadelphia to the fringe of the Pinelands. Large senior-citizen enclaves appeared where before few people had ventured to live. There was serious discussion of a jetport and a new town in the middle of the region. Casino gambling changed the quiet backwater of

urban decay called Atlantic City into the glitzy mecca of the high roller, raising the development expectations of many in the adjacent Pinelands area.

LEGISLATION AND COMPREHENSIVE PLANNING

Citizens and government began to recognize that without a framework for protection the Pinelands would go the way of other once special places in the Northeast. Local citizen groups and state and national environmental organizations came together to focus attention on New Jersey's unique phenomenon. At the same time, the National Park Service was exploring alternative approaches to the protection of nationally important lands, combining limited acquisition with stronger regulatory mechanisms. The interests coincided and the Pinelands became the federally designated Pinelands National Reserve by the enactment of the National Parks and Recreation Act of 1978 (Public Law 95-625, Section 502). This measure invited New Jersey to develop a comprehensive management plan to protect the region in concert with its local jurisdictions and to provide for its implementation through the maximum feasible use of the state's "police powers." Upon submission of the plan to the U.S. secretary of the interior, and approval of the same, the state would become entitled to receive millions of dollars to assist in the acquisition of environmentally critical resources.

While events were proceeding at the national level, New Jersey's governor, Brendan Byrne, was fashioning a strong state initiative to provide for the future protection of the region. A Pinelands Protection Act was being drafted as the federal act was signed into law. In February 1979, Byrne instituted by executive order a moratorium—actually a stringent development-review procedure—throughout the region until the plan was completed.

The New Jersey Pinelands Protection Act (N.J.S.A. 13:18A-1 et seq.) completed a controversial journey through the state legislature and was signed into law by Byrne on June 28, 1979. It remains today among the strongest legislative measures affecting land use in the nation. The act created the Pinelands Commission and gave it extensive land-use planning and implementation authorities. The commission is comprised of fifteen members. Seven members are appointed by the governor with the advice and consent of the state senate, each of the seven counties in the Pinelands appoints one member, and one is appointed by, and represents, the U.S. secretary of the interior.

GOVERNANCE AND THE PINELANDS

The Pinelands Protection Act set forth a unique intergovernmental system requiring consistency of planning and land-use decision-making by all levels of government with an interest in the Pinelands region. All state-agency decisions, whether they are state-sponsored projects or permits granted to others, must be consistent with the regulations administered by the commission. All county and local master plans and land development ordinances are required to be revised to reflect the regulatory land management and environmental standards of the Comprehensive Management Plan. These plans and ordinances must be certified as being in compliance by the Pinelands Commission. Local approvals of individual development applications also may be reviewed by the commission and are subject to modification or reversal upon a finding of inconsistency. All revisions to local land-use plans or ordinances require additional review and certification.

The Comprehensive Management Plan for the Pinelands was implemented under state law on January 14, 1981, and approved by the secretary of the interior on January 16, 1981. The plan is the primary vehicle to achieve the legislatively required goal to "protect, preserve and enhance the significant values of the land and water resources of the Pinelands area" (Public Law 95-625, Section 502[b][1]). The Pinelands area is divided by statute into two major land masses—the preservation area, comprised mostly of public land, and the protection area (Figure 2). Within the preservation area, the plan does not permit residential development, with the exception of a little-exercised exemption for long-time residents who want members of their immediate families to reside on the family's holdings. Berry agriculture and forestry, as well as low-density recreational uses, are the major activities permitted in this portion of the Pinelands. The preservation area may also be viewed as the core area of the Pinelands International Biosphere Reserve. During the past twelve years, only thirty-seven dwelling units have been constructed in this 365,000-acre land mass. Most of the state's acquisition efforts have been concentrated here.

Within the surrounding protection area, an ecologically based planning scheme governs the type and intensity of land use in eight defined management areas. These range from exceptionally low-density residential uses (17 units per square mile) in a 242,000-acre forest area to higher densities (up to an average of 3.5 units per acre) in designated regional growth areas in or adjacent to development that existed in 1979. In between are agricultural and special agricultural production areas that are subject

to near-exclusive agricultural zoning, villages and towns with prescribed development boundaries, and rural development areas with an average density of 200 units per square mile. Military and federal installations are classified as a separate management area devoted to national defense or to specified federal purposes.

All development within the Pinelands must also comply with stringent environmental and other performance standards, including some of the toughest water-quality and wetlands-protection standards in the nation. Additional standards provide for the protection of air quality, wildlife, vegetation, scenic and cultural resources, agriculture, and other facets of the essential character of the Pinelands environment.

The plan also contains the only regional transfer-of-development-rights (TDR) program in the country. Pinelands development credits (PDCs) are allocated to property owners in the preservation and agricultural production areas by a formula based on natural-property characteristics. These credits can be sold to developers with projects in regional growth areas, who, by provisions for redemption contained in local ordinances, are entitled to specified bonus densities. While this program was slow to take hold due to the time required in revising local ordinances in response to the regional plan, over 1,000 TDRs have been severed from sending properties, resulting in the permanent protection through deed restrictions of 10,000 acres at virtually no public cost. A state-operated PDC bank, which buys and sells credits, and a \$30-million bond issue to provide sewer lines in regional growth areas have aided the program.

THE PINELANDS IN 1993

Over a dozen years have passed since the Pinelands plan was implemented in January 1981. Its effectiveness can be evaluated from many different perspectives. These include whether it is achieving the goals set forth in the federal and state legislation, whether it is an effective mechanism for maintaining the Pinelands environment, whether the system of land-use governance involving multilevel jurisdictions is working as envisioned, and whether the Pinelands of New Jersey will remain a place of national and international significance. Today the answers to all but one of these questions are emerging.

The goals of both the federal and state legislation involve resource protection, innovation and experimentation in land management techniques, and the maximization of regulatory control to achieve resource protection. There is little doubt that the Pinelands plan effectively exercises the regulatory

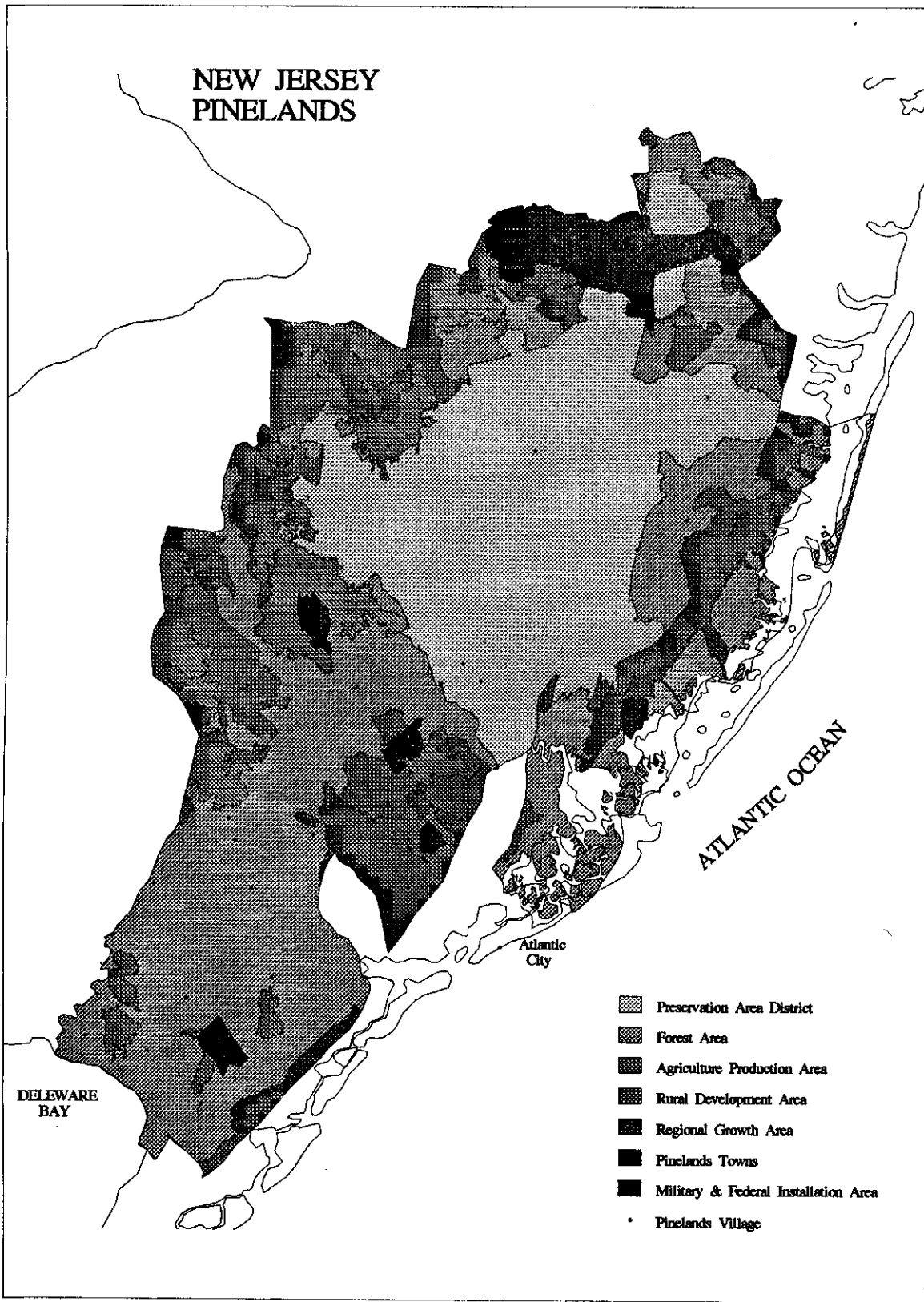


Figure 2. Management areas of the Pinelands National Reserve. Map redrawn by Nathan Bentley from a map by Tina Campbell in *Protecting the New Jersey Pinelands*, Beryl Robichaud Collins and Emily W. B. Russell, eds. Copyright © 1988 by Rutgers, The State University. Used with permission of Rutgers University Press.

framework as far along the continuum from unbridled property rights to unconstitutional taking of such rights as can be achieved in light of recent U.S. Supreme Court decisions regarding the taking issue. The Pinelands continues to be a laboratory for experimentation in a variety of land management techniques, including taking safeguards.

The plan has also been successful in protecting resources until more permanent protective measures can be applied in the future. While devised as a resource-protection effort, the Pinelands plan has also become one of the most effective growth-management programs in the country. Since 1981, 96 percent of all the development that has occurred in this section of economically vibrant southern New Jersey has been located in those management areas devoted to future growth. Indeed, 87 percent of development in this period was permitted in the 10 percent of the Pinelands designated as regional growth areas. The plan's effectiveness in channeling growth away from environmentally sensitive locations into more compact and efficiently served development patterns is evident.

The framers of the legislation affecting the Pinelands envisioned a system of federal, state, and local cooperation aimed at resource protection. In this area of governmental compliance, although not always in cooperation with it, the Pinelands program has achieved perhaps its most significant successes. As of the spring of 1993, forty-nine of the fifty-three municipalities and all seven counties have brought their master plans and land development ordinances into compliance and have received certification by the commission.¹ At the state level, new legislation affecting the region almost automatically contains language exempting Pinelands regulations from such

¹By the spring of 1994, the number of municipalities in compliance with the Pinelands program had increased to fifty-one. *Ed.*

measures. The State Planning Act provides that the State Planning Commission must rely on the adopted Pinelands Comprehensive Management Plan for the nearly one-quarter of New Jersey under the Pinelands Commission's jurisdiction.

The question regarding whether the Pinelands will forever be a semiwilderness in the midst of urban America is still unanswerable at this time. While 65,000 additional acres have been purchased and added to the 250,000 acres owned by the state in 1979, permanent protection remains an elusive goal. The experiment, however, continues, and without it the future of New Jersey's special place would not even be the subject of a question.

CONCLUSION

The Pinelands National Reserve has effectively achieved the goals set forth in federal and state legislation by maintaining the Pinelands environment through a system of land-use governance involving multilevel jurisdictions. As an experiment in resource protection, innovation in land management techniques, and the maximization of regulatory control to achieve resource protection, the Pinelands plan utilizes the regulatory framework as far along the continuum from unbridled property rights to unconstitutional taking of such rights as can be achieved in light of recent U.S. Supreme Court decisions. The Pinelands plan has proven to be one of the most effective growth-management programs in the country, with 87 percent of development over the last dozen years being located in the 10 percent of the Pinelands designated as regional growth areas. As a result, the plan has effectively channeled growth away from environmentally sensitive locations and into more compact and efficiently served development patterns.

Integrating Resource Management on the Lolo National Forest

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Abstract

On the Lolo National Forest, gridlock has been avoided by effective management and communication. Methods include enhancing local relationships, being totally honest and candid with various public groups, and treating all of the involved individuals and groups with human dignity. High-quality resource work is used to determine accurately the impacts of various land management practices.

I was invited to participate in this symposium to share my secrets for avoiding gridlock in national-forest decision-making. The implication was that while appeals and lawsuits are bringing many national-forest programs to a halt there has not been much of a problem on the Lolo National Forest in Montana. We have, in fact, been successful on the Lolo, especially when compared to other national forests in the area. We went for many years without any appeals. Today we get very few appeals, and there have been no lawsuits.

Overall, our resource programs are moving ahead in a balanced way, so the supposition that we have avoided gridlock is probably true. There are no secrets to avoiding gridlock. The staff on the Lolo forest has not discovered the Holy Grail of conflict resolution or peaceful coexistence. Like everywhere else, our world is full of people with different opinions, interests, and values. We seem to be constantly on the verge of conflict spinning out of control, and while we have coped with conflict, we have not found a systematic way to avoid it.

Caring for and managing the land is what I do, and I can't do it in a vacuum. As a result, I've spent a lot of time working in the public arena and thinking about how to operate successfully in it. It's challenging but fun nonetheless. I started learning about conflict when I began my career in Utah on the Dixie

National Forest and later on the Bridger-Teton National Forest in Wyoming. In the late 1950s, I was a ranger on the Dixie National Forest. We were in the process of reducing the grazing permits on the forest during what were called the grazing or cattle wars. In those days, it was common to take the sheriff with us when we went to public meetings. I've been doing that sort of thing ever since.

Let me briefly acquaint you with Montana and with some of the issues surrounding the Lolo National Forest. It has been said that Montana is a state in which outsiders are seeking resources while the locals wage a vicious civil war. It's true. In Montana, *everything* is contentious. It is one of the most contentious times and places that I have ever seen. In fact, it has been said that Montanans would ask for an EIS for the second coming of Christ. I think we would, and we'd probably argue over whether it was proper or not and about what was going to happen to the economy and to the environment. As I've said, we are in some very contentious times.

The Lolo National Forest is located near Missoula, Montana. North of the Lolo is the Flathead National Forest. Today the Flathead has 50 million board feet of timber under contract. It used to sell twice that amount, and this year it will not sell anything: there will be no national-forest timber for sale in the Flathead Valley next spring. The Bitterroot National Forest to the south is down from 30 or 40 million board feet to 5 or 6 million. That timber may not get moved either. The Deerlodge National Forest is in

This paper was transcribed from an audiotape of the presentation given during the symposium. *Ed.*

the same position, and harvests on the Panhandle National Forest west of the Lolo are also going down, although not as dramatically.

In contrast, we have met our timber targets on the Lolo every year for the last decade. We don't have any lawsuits. We will make our target this year. For those of you who are timber-program junkies, I'll tell you that our pipeline is full. We have enough timber in sales to make not only this year's target but next year's as well.

The Lolo's success lies in effective management and communications. None of the basics is new to any of us in resource management. You can read about them in a variety of management and communications textbooks. Our management approach and view of the world are defined by those basics.

We don't follow any of the latest kinds of approaches—*informed consent, limits of acceptable change, demographic mapping of different values, consensus building, and the like.* Having a consensus is good. There are systems for consensus building, but we don't follow any of them. So what do we do?

To make the basics work, we try to maintain and enhance local relationships. Of course, we are affected by national and regional issues. Our local people are affected by those same issues as well, but we have little control over national issues and are not typically involved in them. What we try to do is to maintain and enhance our local relationships. The social fabric of the local situation is what concerns us. It has been said that all politics are local politics—there are no national politics. That view permeates the way that we deal with our relationships and our issues. How do we do that?

We try very hard to be honest. There is nothing very revealing about that. We try to be honest with ourselves about what we really believe, and we try to be honest outwardly with the public. We try to be very candid with people about the likely impacts of various management actions. We try to be open and receptive with people who come to us with ideas. We try to be respectful of others. We try to build that aura of human dignity with the people we contact. We stay involved in local issues, and we try to understand the local folks and work to keep building relationships with the community.

We freely admit our mistakes. We have a saying, "When you're in trouble, open the windows and doors and let the wind blow through." Be open; admit what is going on; be free; don't be so tight. *Don't be so bureaucratic.*

We are constantly changing. We try to capitalize on new scientific developments and new trends in social beliefs and values, and we try to tell people how we are changing. We try very hard never to surprise the public or public figures—Congressional representatives, county commissioners, anybody in the

public arena.

The values and beliefs of stakeholders are very important to us. We work hard to be good listeners and communicators. We spend more time dealing with that than with many of the other skills I've discussed. Tolerance is a virtue for us—tolerance of others' views and beliefs. We try to practice that as well.

We try very hard to understand the values and beliefs of local people. It does not suffice simply to understand a position such as "I don't like clear-cuts." Instead, we try to understand *why* those feelings occur. What values and beliefs are being represented? If we are going to resolve conflicts, we have to understand fully people's values.

We also view conflict as an opportunity to build goodwill and trust among opposing factions. Conflict is tearing at our social fabric. It is up to each of us individually to keep that from happening. When we have two groups fighting over an issue, we try very hard to get them together in nonthreatening ways to create situations that give them a chance to build mutual respect for each other—and for us. We don't pit groups or individuals against one another in conflict resolution.

One of our basic tenets is to do very high-quality work on the ground—good resource work, good inventory, good knowledge, and good principles. Then, based on that foundation, we follow through with the courage of our convictions. We try to remain objective and to avoid being defensive. We try to keep an open mind.

We believe that it is our job to take a stand and to do what is right regardless of the political winds or consequences. That has to be modified with all of the other things I've talked about, but once we are there, it is my responsibility as the forest supervisor to make a decision. There are plenty of checks and balances in place once a decision is made. A decision can be appealed or we can be sued—all sorts of things—but it is the forest supervisor's job to make the decision. This gives interested parties the opportunity to focus debate rather than to wait for consensus, which may never occur. That may not work in other parts of the country, but it seems to work in Montana.

We view relationships from a long-term perspective and use conflict as an opportunity to exercise relationships. When someone is mad, that's a great time to get acquainted. We try to know people and to recognize that today's enemy may be tomorrow's ally and that how we treat people who oppose us today may affect tomorrow's relationship. We try to build a reservoir of goodwill among warring factions. In the community, we reinforce the idea as much as possible that we are all in this together. We live here and we *have* to get along. We stress that all the time.

We also spend a lot of time on our own internal

organization and relationships. In fact, all of the things we practice in the public arena are done inside the Forest Service even more: being very honest with each other, being candid, giving trust to employees, paying attention to resource matters, requiring and demonstrating teamwork at all times, tending to relationships within the team, and placing a high value on creativity and competency. We are constantly trying to grow and learn.

Our focus is on the land and on doing the right things. As a result, we debate the issues among ourselves and strive to base our decisions on high-quality information. We try to build a balanced program that does not just focus on commodity production. For example, we now house the National Center for Wilderness Training for Forest Service line officers, and we have a dynamic cultural resource and heritage program.

The point is that if our team doesn't have a high level of morale, trust, loyalty, and commitment there is no way in the world that we can build any kind of relationship with the public. The bottom line for us is internal. If I can't convince the people within the Forest Service that what we are doing is right, there is no way that we are going to convince the public.

I have described some basic principles of communications and management we use on the Lolo National Forest to reduce conflicts over resource issues. Now I'd like to share a couple of experiences to illustrate these principles in the hope that by sharing experiences we will learn enough about these principles to apply them to other situations.

Let me first talk about a legislative appeal we received and how it was ultimately resolved. It isn't about timber or fish or water. Instead, it concerns a cross-country ski area on the edge of Missoula, Montana. Patty Canyon has been a popular cross-country skiing site for years. Over time, a series of trails was developed, but the trails were poorly designed. Increased use made them unsafe, and people were beginning to get hurt. To improve public safety, we brought in an expert to design safe trails for the area.

The project was done in cooperation with the University of Montana and a local Nordic ski club. A design was developed, and we scheduled a public meeting to discuss options and to determine what to do. At the meeting, nearby homeowners and members of the ski club were in disagreement over some issues. The report I received from the meeting indicated that there was little to be concerned about, and we proceeded to implement the trail design. Ten days after we announced the decision, we received an appeal from the homeowners, indicating that they did not want any development of the ski area. The appeal stated that area residents didn't want us to cut any more trees or to widen any more trails, and they didn't want skate-skiing—they wanted to glide diag-

onally. They didn't want to put up with the racers and the people who ski fast—they wanted to ski slowly.

In response, I asked our public-information officer to make some phone calls to determine what was going on. In talking to the homeowners, the response she received was the same as that given in the appeal, but she dug deeper. She responded to their concerns by telling them that the proposal had something in it for everyone: people could ski wherever they wanted, and there were ski trails for both residents and ski skaters; but the residents were angry with the Forest Service because they felt that they had been attacked in the public meeting. There were some strong-willed people in the ski club, and many of the residents were folks in their 50s and 60s who were quiet and reserved. They felt that they had been threatened and that their values had been ignored by the Forest Service employee at the meeting.

As a result, I arranged for a meeting in one of their homes. I asked them what was wrong, and initially they responded by restating the concerns raised in the appeal, but eventually we got it all out in the open. I apologized and said that we were wrong. I said that we never wanted to conduct a meeting that threatened people, and I asked if we could find any common ground. The apology turned a corner—that's all it took.

We found common ground, and the facility is operating today. We had to take into consideration feelings, beliefs, values, and social fabric. What did we do? We admitted mistakes, opened the issue for more discussion, met with the concerned individuals, and compromised. We made some minor adjustments in the ski-trail design but nothing substantial.

I'd like to describe another interesting example that may reflect on our management philosophy. The Lolo National Forest has a wonderful record of not having any appeals and of meeting its timber targets. Our regional office, in its infinite wisdom, published that fact in the newspaper, setting me up beautifully. The Lolo is the only forest that meets its timber targets. Several days after the newspaper article appeared, I received a phone call from a member of an environmental group located in Bozeman, which is five hours away. The caller said that obviously no one was watching the Forest Service on the Lolo and that the environmental group intended to change that. He mentioned a timber sale in the Thompson Falls-Plains area and said that he was going to sue us. Well, that was disquieting news since we had already sold the timber and had contracted for road construction. Furthermore, the appeal period for the sale had expired.

In response, the public-information officer, the district ranger, and I met members of the group halfway between Missoula and Bozeman in neutral

territory. I asked what the problem was, and they said that they thought our decision notice was flawed—that this date was wrong and that date was wrong, etc. I then asked if we were doing anything wrong on the ground. They responded that they didn't know since they were not familiar with the area. I said that if they wanted to fight us over "process," we could all go to court—that we believed our process was reasonable. I further said that if they wanted to point out a resource problem that we had overlooked they could tell us and we would listen and fix it but that I was not going to waste any more time on process.

They came up to the forest and spent three days with the ranger and a local state fish and game manager, and lo and behold, they found a problem. We were going to build a road in an elk bioactivity area—better known as a wallow. This wallow was an important area of habitat that we probably shouldn't have disturbed. As a result, we modified the contract at a cost of \$50,000. This modification included relocating the road to another area and negotiating with the timber-sale contractor to harvest more volume in an area that was less contentious.

This environmental group is now suing forests and establishing lawsuits throughout the state of Montana. However, when we have a problem with them, we talk it out and have avoided litigation. The willingness to change, the willingness to listen, and the willingness to be objective and not defensive is helping us.

Of course, there is a militancy in some groups that can lead to situations in which people do not want a relationship or a resolution of the issues. They are also part of our world.

We have some individuals who have burned bridges on the forest. We have a professor at the University of Montana who sits on a rock surrounded by twenty students and says his mantra: "Wilderness is good; the Forest Service is evil. Wilderness is good; the Forest Service is evil." He didn't realize that my wife was in his class. Then there's the guy who only interviews me through the lens of his video camera. He never asks me a question unless the video camera is going. It's very tough to deal with somebody like that.

We have tree spikers, and we have people who appeal timber sales as class projects. On the Flathead

National Forest, a student from the University of Montana kept calling and asking when decision notices were going to be released. Some employees got worried about it and asked the student why he was hurrying them. He replied that the semester was nearly over and that if he didn't finish his appeal he wouldn't get any university credit. What do you do in those situations?

While everyone must be treated with respect and dignity, you can't build a relationship with some difficult people. As a result, I don't give them the same amount of time that I give to other groups. I don't invest in them because I realize that I can't change them—they must change themselves. When they are ready to work with us, we will work with them. While we hold out the olive branch, we are not intimidated by illegal actions or threats. I mentioned our bridge burners earlier. They cost us about \$40,000 to replace that bridge with a concrete reinforced bridge—no longer wood. We would rather put our money elsewhere, but we will not let them get away with intimidation. If we are intimidated by lawlessness, we will not be very effective public agents.

In summary, I would say that we take a long-term view of relationships and adhere to the following guidelines:

1. Conflict is an opportunity to exercise a relationship.
2. Know people and their values.
3. Today's enemy may be tomorrow's ally.
4. Build a reservoir of goodwill among opposing factions in a community.
5. Reinforce that we all have to live together.

I don't think I've said anything that isn't very basic to management organizations and to interpersonal and public relationships. If we are doing anything differently, it is just that we are doing it consistently. And we are working very hard at it. It is like one of my bosses said to me a couple of years ago: "You've been doing this so long that it must be easy for you." I said that working in the public arena today is like riding a green horse: if you aren't paying attention every minute while you are on top of that horse, you aren't going to be on top of it for long.

The Elk, the Cow, the Ranger, and the Rolex: Urban/Wildland Resource Management Conflict at Mt. Diablo State Park, California

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Abstract

The grazing dispute at Mt. Diablo State Park in California provides a case study for examining the dynamics of conflict over park management. It also offers a glimpse of what the future likely holds for many wildland parks in the United States. The dispute illustrates that no park is an island, either ecologically or socially. The ecological setting and the human participants in the conflict have a dynamic interaction moderated by cultural values and norms. At Mt. Diablo, cultural values and the myths that give them cohesion have encouraged the participants in the conflict to strive toward impossible and apparently irreconcilable goals for the park. Proposed solutions must offer a way to reconcile these divergent views if they are to last.

INTRODUCTION

Mt. Diablo State Park, located about twenty miles east of San Francisco Bay, has become, over the last decade, a gigantic suburban park—18,000 acres of wildland hemmed in on three sides by encroaching suburban development. As a case study for examining the dynamics of conflict over park management, the grazing dispute at Mt. Diablo provides a glimpse of what the future likely holds for many wildland parks in the United States. What is learned from studying the conflict is that no park is an island, ei-

ther ecologically or socially. The ecological setting and the human participants in the conflict are deeply intertwined. The connection between the people and the Park is through cultural values. In the case of Mt. Diablo, cultural values and the myths that give them cohesion have encouraged the participants in the conflict to strive toward impossible and apparently irreconcilable goals for the park. This paper examines the roles of people, of the environment, and of cultural values in a conflict about livestock grazing at Mt. Diablo State Park.

Several questions plague planners and managers of national parks and other natural areas or reserves (Huntsinger and Fried 1993):

1. How is *natural* defined?
2. How is a changed and/or truncated ecosystem managed?
3. What is a cultural resource, and how is the protection of cultural and natural resources balanced?
4. What responsibilities and relationships should a park have with local communities?

These questions challenge California's state-park-system personnel, including the managers of Mt. Diablo State Park. The answer to each question depends to some degree on the values or norms of the people answering the questions. Resource managers, trained to manage for the ecology or for the resource, often forget that they too are subject to the mediation of their own values and norms in the resource management decisions they make.

Cattle are the focus of many debates over resource management; they even played a prominent role in Harris's (1966) seminal work on culture as a buffer between people and their environment. Perhaps cattle fill this role because grazing cattle typically act as an ecological intermediary between people and environment. In resource conflicts, cattle often come to symbolize a particular type of relationship between people and nature. The Mt. Diablo conflict features the cow as a focal point in the struggle over competing visions of the Park's future. For some, the cow is the despoiler of the pristine wilderness and a symbol of human conquest and exploitation of wildlands. For those who romanticize the frontier and the cowboy, the cow is a nostalgic remnant of the Old West that shaped the American character. Perhaps most significantly for Mt. Diablo State Park, the cow, and her capacity for ingestion of raw biomass, is the heroine of those who seek a safe haven in suburbia and a congenial neighbor in nature.

MT. DIABLO STATE PARK

The 18,000-acre Park centers on Mt. Diablo itself, a 3,849-foot peak that is the northernmost extension of the Diablo Range. Because it is an isolated, distinctive peak, it was used to establish the Mt. Diablo Baseline and Meridian of the U.S. Coast and Geodetic Survey in the nineteenth century. From the summit, as much as 40,000 square miles of country

are visible on a clear day, looking across the Sacramento Valley into the Sierra Nevada and north to Mt. Shasta 300 miles away (California Department of Parks and Recreation 1990). Contra Costa County, where the Park is located, has a rapidly growing population of more than 800,000 people.

The Park is managed with an island theme. Because of its position at the end of the Diablo Range and its relative isolation, the mountain is home to a diverse flora, including several endemic species. The characteristic vegetation is oak woodland, annual grasslands, and chaparral or coastal scrub. A paved road winds through the Park to the summit, and most of the 500,000 people who visit each year drive to the top, look around, and drive back down. There are, however, many hikers, bicyclists, horseback riders, campers, and wildlife or plant-life aficionados who spend time on the trails.

In the open annual grasslands and woodlands of the western slope of the mountain is a 60-acre inholding called the Diablo Ranch. The cattle raised by the owner of this ranch graze approximately 7,500 acres of the Park annually (California Department of Parks and Recreation 1990). The Diablo Ranch grazes between 300 and 570 cows year-round in the park, rotating them from pasture to pasture so that at any given time far less than 7,500 acres are being grazed. This pattern of livestock grazing is but the latest chapter in the almost 200-year grazing history of the land now designated as Mt. Diablo State Park.

PARK HISTORY

As far as is known, the original human inhabitants of the Park were Miwok Indians. In the nineteenth century, most were killed outright, died from introduced diseases, or were shipped off to Mission San José to serve as slave labor for the Spanish. About one-third of the mountain was included in an 1834 Mexican land grant known as *Arroyo de las Nueces y Bolbones*. In the years following statehood in 1850, almost all of the grant properties in this part of California became public domain or were owned by Anglo ranchers. Transfers were often due to prohibitive legal costs associated with confirming grants given by the Spanish and Mexican governments or to defaults on property taxes. Because of its outstanding natural features and scenic value, 630 acres of public domain land at Mt. Diablo's summit were set aside as a game refuge in 1921. When the state-park system was established in 1931, the refuge became a park. In the 1960s, the park system began an ambitious acquisition program, mostly carried out by purchasing adjacent ranches.

In 1979 most of the Diablo Ranch was purchased from the elderly Angel Kerley. She sold 1,600 acres to the state parks, donated 281 acres, and kept the

small inholding now known as Diablo Ranch. At the time the ranch was sold, a ten-year renewable grazing contract was signed. Some of those present at the signing and Angel Kerley's heirs argue that the intention was for grazing to continue in perpetuity as a "living resource" for future generations, as is also indicated by contemporary newspaper accounts, but there was no written agreement to this effect (Stark 1987). In 1984 as the Park continued to grow, the contract was amended to extend grazing by the permittee to new acquisitions, over time bringing the grazed acreage to the present 7,500 out of 18,000 total Park acres. There is argument over the validity of this amendment too: Park staff argue that it was made by the politically appointed park-system director without proper consultation with park-system resource management professionals.

In 1989 after public hearings, resource inventories, and the other accouterments of public-lands planning, the general plan for the Park was completed. Publication of the plan coincided with the expiration of the first ten-year grazing contract. The plan called for the removal of grazing from most of the Park. Instead of the present commercial cattle ranch, a ranch interpretive of the Spanish *rancho* period was recommended, with 100 or fewer cattle or some longhorns and with grazing restricted to less than 1,000 acres. Volunteers dressed in period costume would interpret this simulated ranch for visitors. The livestock might not be on the Park property year-round, depending on the size of the herd, and the Park would lose the revenue it received from grazing receipts, but this was judged to be well worth the expected benefits to Park ecosystems (California Department of Parks and Recreation 1990).

THE FACTS

In the debate about whether to graze at Mt. Diablo, irrefutable facts about the actual impacts of grazing on the park environment are few. The "factual" or "scientific" arguments made in the general plan for the removal of grazing were often persuasively countered by equally expert arguments in letters and hearings. Following are some examples of dueling expert arguments made about grazing impacts at Mt. Diablo:

1. Grazing encourages wildflowers by reducing grass competition and making the flowers more visible. Cattle trample and eat wildflowers.
2. Grazing causes undesirable vegetation change. Grazing suppresses poison oak.
3. Cattle eat young oak seedlings, slowing or preventing oak regeneration. Grazing reduces the

grasses that compete with the seedlings and reduces the hazard of fire by preventing a buildup of dry fuel around the young oaks.

4. Cattle grazing introduces and encourages exotic grasses and weeds on the mountain. Exotic natives and invade even without livestock grazing.
5. Cattle grazing just replaces former grazing by now-absent but once-abundant tule elk. Cattle and tule elk have quite different grazing behaviors.
6. Fences are ugly and detract from the hiking experience. Fences add to landscape interest and give the Park a bucolic character.
7. Cattle grazing damages soil. Terracettes, trails that follow the contours of the hills, are one example of possible damage to the soil. Terracettes enhance water infiltration by creating level areas. Terracettes reduce water infiltration by increasing soil compaction.
8. Grazing causes accelerated soil erosion. Roads cause most of the accelerated erosion on the mountain.
9. Ranchers have put water developments in streams, disturbing the natural hydrology. The local wildlife has come to depend on the year-round water supplies that have resulted.

In the end, Park staff writing the Mt. Diablo State Park General Plan resolved all this confusion by determining that current grazing at the Park was an "unacceptable improvement." Unacceptable improvements are described in the California park system's legislative mandates as follows: "Improvements which do not directly enhance the public's enjoyment of the natural, scenic, cultural, or ecological values of the resource, which are attractions in themselves or which are otherwise available within a reasonable distance outside the park" (California Public Resources Code, § 5019.53).

Livestock grazing was found to have some value as a cultural resource, which the state parks are mandated to protect, particularly if presented as an opportunity to interpret the Spanish period. A commercial cattle ranch, no matter how exotic or anachronistic it may seem to urban Californians, was not judged to be a cultural resource with sufficient legitimacy or to be of enough interest to Park visitors to justify grazing 7,500 acres.

The decision exceeded the expectations of groups like the Sierra Club, which had sought only to confine grazing to the 2,000 acres of the original Diablo ranch, and was much heralded in the environmentalist press. Given that Mt. Diablo is located in such a heavily urbanized—or, more accurately, suburbanized—setting, one that does not allow any possibility of arguing the economic benefits to rural

communities of continued public-lands grazing, this conflict should have been short-lived. Instead, the conflict has dragged on for years, becoming a feud that appears to have caused great damage to local feelings about the state parks. The conflict has gone to the courts, where the Park system's position was upheld, yet cattle still graze the Park. Why?

To analyze the dynamics of this conflict, and to determine how typical or atypical it might be of current and future grazing conflicts or park-management conflicts in the West, each of three components—environment, people, and culture—of a model derived from the work of Harris (1966) and others must be considered (Figure 1). The dynamic interrelationship of ecology and social values has shaped this conflict.

cities where most earn their keep. In addition, some industrialization is taking place along the freeway corridor immediately to the west of the Park. As a result, the extensive and contiguous tracts of oak woodland, annual grassland, orchards, and farmlands that once surrounded Mt. Diablo have now been fragmented by housing and commercial developments of every description.

Homes near the Park are not cheap. Suburbanites attracted to living near Mt. Diablo pay well above \$300,000 for what would be considered anywhere else a modest tract home. Even these modest homes have given way to developments that can only be described as gated communities of mansions, such as the Blackhawk development on the Park's southwestern flank. No home in Blackhawk proper sells for under \$600,000.

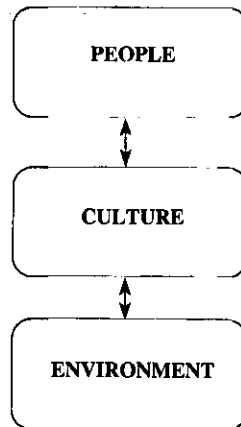


Figure 1. Culture as a buffer.

THE ENVIRONMENT

Three environmental characteristics of the park have had a major influence on the nature of the conflict. First, Mt. Diablo State Park is now indisputably at the suburban/wildland interface. Next, the ecology of the Park has been irreversibly altered and its ecosystems truncated artificially by the borders of the Park. Finally, the Park is located within the Mediterranean climate zone. This environmental setting has significantly influenced the types of people who believe they have an interest, or a right, to determine how the Park is to be managed, particularly with respect to livestock grazing.

THE SUBURBAN/WILDLAND INTERFACE

In 1900 central Contra Costa County was a land of cattle ranches and extensive land use. Today the population of the County is rapidly growing, and the Park is ringed by commuter communities. The inhabitants seek a home life far from the crime and poverty in areas of Oakland, San Francisco, and other Bay Area

CHANGED ECOSYSTEMS

In the journal of William H. Brewer, written in the early 1860s, the former abundance of various types of wildlife at Mt. Diablo is described: "Game was once very abundant—bear in the hills, and deer, antelope, and elk like cattle, in herds. Russell said he had known a party of thirty or forty to lasso twenty-eight elk on one Sunday. All are now exterminated, but we find their horns by the hundreds" (Brewer 1966).

Largely because of the market hunting of the Gold Rush period, much of the fauna of the Mt. Diablo area was eliminated. The tule elk was once the largest herbivore on the mountain, and with the pronghorn antelope, it grazed the grasslands. The elk prefer grasses, while antelope prefer the broad-leaved herbs and deer prefer the shrubs. Today the mule deer are all that remain of this herbivore complex. The grizzly bear was once the largest predator in the area; today the coyote and an occasional mountain lion are left. The possibility that any of this fauna might be reintroduced to the park is negated by its urban setting. Feral pigs also wander the park, as do roaming packs of domestic dogs and, near housing, domestic cats.

The flora has undergone even more massive change. The grassland has been almost entirely converted from one most likely dominated by native perennial bunchgrasses, such as purple needlegrass (*Nassella pulchra*), to an annual grassland comprised of exotic species from other Mediterranean climate regions. The native species are now found concentrated in refugia of endemic soil types or with other characteristics that limit the growth of the highly competitive annual grasses or in areas excluded from grazing or cultivation since settlement or for a very long time.

THE MEDITERRANEAN CLIMATE

On a spring day, the view from the Park out to Blackhawk is of lush green hillsides dotted with luxury homes. In a wet year, the grass can average four feet high on some sites. During the summer, it is a different matter. The hillsides are brown and covered with a mat of dead annual grasses: California has a drought every year, starting in about May and running into October. A wet rainy season merely increases the amount of vegetation that will dry out in the summer. Almost all of the rainfall comes during the winter when temperatures are mild. During the hot summers, California essentially becomes a grass-drying oven. Because of this climate pattern,

which is typical of Mediterranean regions throughout the world, fire is an unavoidable part of the ecology of the area.

The vegetation types in the Park have evolved with fire, and the pattern of fires that occurs can greatly affect the type of vegetation found on a particular site. While soil characteristics play an important role, the frequency and intensity of wildfire can determine whether a site is occupied by shrubs, trees, or grasses. The generalized successional models used in many areas for setting resource management objectives are not very effective in this kind of situation, where disturbance, in the form of fire pattern, is an integral part of plant-community dynamics. A highly simplified state-transition model provides a way to look at the role of fire at Mt. Diablo (Figure 2). In very general terms, the major plant communities are stable when certain patterns of fire occurrence prevail. A shift from a low-intensity fire every five years to a high-intensity fire every thirty years, however, can have profound effects.

Evidence of fire is easy to spot on the mountain. The peak's prominence no doubt makes it a magnet for lightning. Miwok Indians and nineteenth-century ranchers intentionally burned areas for a variety of reasons. The flammable nature of the mountain has had a profound effect on the dynamics of the grazing controversy.

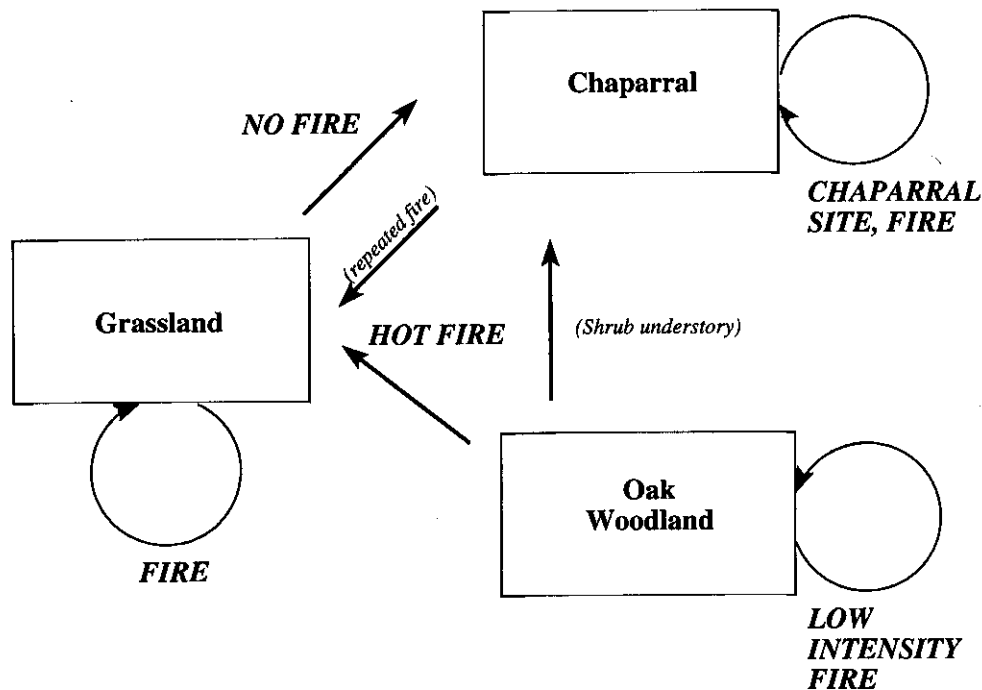


Figure 2. A state-transition model for California-coast-range vegetation and fire.

PEOPLE AND CULTURES

The environment has influenced the kinds of groups enmeshed in the battle and, in turn, the cultural biases and underlying beliefs about the appropriate human relationship with nature that have caused such conflict.

From the point of view of public-agency staff, in the archetypal public-lands grazing dispute there are two major kinds of players or stakeholders: the environmentalists and the cowboys. The Mt. Diablo case is no exception. These two groups are usually thought of as highly polarized. In a study that surveyed members of environmental groups concerned with public lands in eastern Oregon and ranchers concerned with grazing permits, more than 90 percent of the ranchers thought there was too much wilderness in the local Bureau of Land Management district, while more than 90 percent of the members of environmental groups said there was too much grazing in the district (Huntsinger and Heady 1988). At least one interpretation puts a conflicting set of mythologies at the heart of such conflict. The first myth defines pristine nature as the original, harmonious human home, one that has been all but lost due to destructive human behavior. The second myth describes pristine nature as a dangerous but potentially bountiful provider that has always needed taming to support human civilization. These underlying visions are reflected in conflicting idealizations of parks as fragments of pristine wilderness as opposed to parks as vignettes of the frontier West that shaped the independent, self-sufficient, American character.

In accordance with the first view, people ruin things when they attempt active management strategies: a hands-off approach to management is the safest course. The second viewpoint demands a human role to give meaning to an otherwise "empty" or wasted resource. For one, the cow symbolizes the taming or spoiling of perfection; for the other, the cow represents the taming or domestication of a wild and errant landscape that is the key to prosperity and human well-being.

This stereotypical view of public-lands grazing disputes is ubiquitous enough that Park staff, in the early stages of the Mt. Diablo conflict, had every reason to believe that community support, in communities of exactly the white-collar, professional people who make up the membership of the typical environmental group, would favor the decision to remove grazing. The conflict should have been a short one, with a few remnants of the local livestock industry battling the forces of State and local governments and organized environmental groups. But due to the ecological characteristics of the park, in particular the Mediterranean climate, a third group with yet another set of values is playing a great role in the

dispute. This third group is the suburbanites who own homes near the Park. These suburban dwellers believe they have much at stake in how the Park is to be managed.

Buying a home in the suburbs indicates a desire not only for a landscape with more plants in it but also a desire for a safe place to raise the kids and a safe, long-term investment in a home. A survey of people who lived in suburban/wildland interface areas indicated that more than 80 percent of them chose to live in that environment because they wanted to "be near natural beauty" (Huntsinger and Fortmann 1990). Unfortunately, those who bought homes near Mt. Diablo soon discovered that they were living next to a looming, 4,000-foot-tall fire hazard. Such a hazard or risk runs counter to the cultural value put on safety by the typical suburbanite.

Fear of fire has driven the suburban neighbors of Mt. Diablo into the fray. A set of insiders, including agency staff, environmentalists, and grazing permittees, has long been the group most often involved in the typical grazing dispute and in previous parkland-use planning at Mt. Diablo. The current controversy engages the new group—the suburbanites—which believes it also has a strong interest in how the Park is managed. This group, right or wrong, believes that livestock grazing prevents or slows the spread of fire in the grasslands. Members of this group also feel more comfortable looking out their back windows into the baleful eyes of a cow rather than at a prescribed burn or herbicide spraying operation (Bates 1991). For this reason, a third set of cultural values has become a major part of the conflict. The underlying mythology of this third group is perhaps similar to the one that holds that the taming of nature was a necessary preamble to human achievement, but the emphasis is on maintaining a comfortable truce between people and nature. People who hold this point of view want nature and the Park to be a good neighbor. To them, the cow symbolizes a gentler, safer kind of landscape.

THE ROLE OF PROFESSIONAL NORMS

Professional norms can significantly affect administrative decision-making (Fortmann 1990, Schiff 1966). The decision to remove commercial grazing from the Park was made based on Park staff interpretation of legislated state-park mandates and directives, which they believe directed them to remove grazing from the Park. The evolution of state-parks management directives as written in state legislation has followed an evolution similar to that described for the national park system (Chase 1987).

Initially, the purpose of acquiring State parks was described as simply to protect significant natural or historic features and to perpetuate their values for

future generations. Following World War II, provision of recreational facilities was recognized as an objective of the state-park system, and the system was expanded to achieve it. In 1971, a time of intense public interest in ecology, the California legislature amended the Public Resources Code (§ 5019.53) concerning the State parks to reflect the spirit of the times: "Each State park shall be managed as a composite whole in order to restore, protect, and maintain its native environmental complexes to the extent compatible with the primary purpose for which the park was established."

In the Mt. Diablo General Plan, Park staff take this institutional ideology even further, stating that not only will the Parks be managed for native environmental complexes but that natural processes will be used to accomplish this objective. This point of view illustrates a set of professional norms similar to the values of those searching for pristine wilderness in the park and advocating a hands-off management strategy. In line with this view, Park management historically has been inward facing, directed toward what goes on inside the "island" Park because the hope is to make it pristine and to insulate it from human despoilment. Land outside the Park is irrelevant because it is already spoiled by commodity production or housing. For Park staff, the cow came to symbolize human exploitation of the landscape.

The flammability of the Park makes the unrealistic nature of the Park staff's goals only too apparent. To get local fire districts to sign off on the general plan, a wildfire-management plan was developed (Maxfield 1991). The plan mandates the use of herbicides along Park roads and the maintenance of an extensive network of fuel breaks (California Department of Parks and Recreation 1987). The first spraying along the paved road was more extensive than intended and destroyed what had long been an ungrazed refuge for the park's remaining native grasses. At a public hearing on the general plan, one citizen broke into tears when describing the destruction of these stands of native grasses.

Also as part of the fire-danger mitigation plan, the Park proposes to construct and maintain annually over 100 miles of fuel breaks, twenty- to fifty-foot wide strips cleared of all vegetation, often by bulldozers (California Department of Parks and Recreation 1987). The general plan acknowledges that the planned construction of fire roads and fuel breaks makes the entire Park (which currently sports roadless areas thousands of acres in size) ineligible for any wilderness-area consideration. Prescribed burning is proposed as a substitute for directed grazing as a vegetation-management tool. However, urban air-quality issues, high costs, and perceived risks to nearby homes will make this difficult to implement.

Clearly, what happens outside a park—in this case suburban development—has profound implications for what happens and what can happen inside a park. Earlier attention to local land-use planning might have preserved more management options for Mt. Diablo, but institutional ideologies and professional norms instead supported the park-as-island concept. Unlike the U.S. Forest Service, there is no historical mandate to support local communities. In fact, there is little guidance of any kind for state-park staff seeking to chart a course in park/community relations. Mt. Diablo Park staff are now beginning work to examine what is happening outside the park and to evaluate how working with other public-land ownerships might head off further damaging conflicts and protect biodiversity and wildlife habitat in Contra Costa County on a larger scale.

CONCLUSIONS

The Mt. Diablo grazing controversy raises all of the familiar issues in park management, with new twists related to the imperatives of environment and the implications of suburban development near parks. Referring to the three-part model (Figure 1, page 70), a Mediterranean fire-adapted ecosystem influenced the types of people involved in the conflict. Most significantly, a wealthy and activist group of nearby homeowners who felt threatened by the flammability of the Park became involved. This group's involvement shifted the conflict away from the expected one of cowboy-versus-environmentalist values. In fact, livestock interests were nearly relegated to the spectator's seat as the homeowners' and environmentalists' visions of what a park should be clashed. Imagine a public hearing where a man gets out of his BMW, strides up to the podium in his Italian shoes and silk shirt, and toys with his Rolex as he attests to the wonders of cattle grazing.

No park is an island: the environment and the setting of a park, and the values of the people who feel they have a stake in decisions about park management, ultimately affect available management options. In the case of Mt. Diablo, the cow became both focal point and symbol of the different cultural values held by the participants in the conflict. Some people desire a park that is a pristine landscape, unspoiled by conspicuous indications of human use such as the grazing cow. Others see the cow as a symbol of the taming of a landscape to permit human success or as indicative of a safer, kinder, pastoral type of environment. Based on idealizations and unrealistic goals, these views are difficult to reconcile.

There is more than one common-sense solution to the difficulties faced at Mt. Diablo, but the insular

focus of the state-park system may make it difficult to arrive at such a solution. This conflict has already evolved into a feud that has significantly damaged Park/community relations. In fact, the views of all participants are based on unattainable visions: the park is not a pristine wilderness; it is not a remnant of the Old West; nor is it a safe, well-behaved neighbor. A new "negotiated" definition of what the park should be, and of how it should be managed, is needed--and an important first step is for each participant to recognize their interdependence.

There are some important lessons here. First, strong, enlightened land-use planning could have kept a grazed or cropped buffer around this Park. Second, conflicts over resources are a function both of human values and the environmental setting of the conflict. Third, conflicts over park or resource management cannot be solved by science alone. Finally, resource managers should not delude themselves into thinking that they are objective participants in such conflicts, free of values or norms that influence their decisions and perceptions. When areas are managed for ecosystem integrity, or whatever the latest buzzwords are, a particular set of values--institutional or personal--is espoused. This set of values is used to determine whose voice gets heard, and whose rights are represented, when park-management decisions are made.

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Greater Yellowstone: Managing a Charismatic Ecosystem

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Abstract

Greater Yellowstone provides a compelling test case for the emerging concept of ecosystem management on public lands. Containing charismatic natural resources as well as diverse local communities, the Greater Yellowstone region—now commonly referred to as the Greater Yellowstone Ecosystem—suffers from ecological fragmentation and accelerating development pressures. In 1987 the U.S. Department of Agriculture Forest Service and the U.S. Department of the Interior National Park Service, acting through the Greater Yellowstone Coordinating Committee (GYCC), jointly undertook a widely heralded interagency coordination process, which offered an opportunity to define and institutionalize ecosystem management principles on a regional scale. Confronted with conflicting national and local interests, the GYCC ultimately failed to adopt meaningful ecosystem management goals, leaving the region's immediate future shrouded in uncertainty. Nonetheless, the Greater Yellowstone experience has helped to refine the concept of ecosystem management and has provided important lessons about the pitfalls of interagency coordination. Moreover, the entire process has legitimized Greater Yellowstone as an ecological entity and has set the stage for further ecosystem-wide initiatives.

"Capt. Clark and Drewyer killed the largest brown bear this evening which we have yet seen. . . . Capt. Clark thought he would weigh 500 lbs. [F]or my own part I think the estimate too small by 100 lbs. [H]e measured 8 Feet 7½ Inches from the nose to the extremity of the hind feet. . . . [I]t was a monstrous beast. . . . [W]e now found that Bratton had shot him through the center of the lungs, notwithstanding which he had pursued him near half a mile. . . . [T]hese bear being so hard to die reather intimedates us all; I must confess that I do not like the gentlemen and had reather fight two Indians than one bear" (Moulton 1987).¹

"The Yellow-stone has a large fresh water Lake near its head on the verry top of the Mountain which is about one hundred by forty Miles in diameter and as clear as crystal. [O]n the south borders of this lake is a number of hot and boiling springs, some of water and others of most beautiful fine clay and resembles that of a mush pot and throws its particles to the immense height of from twenty to thirty feet. . . . There is also a number of places where the pure suphor [sulfur] is sent forth in abundance. [O]ne of our men Visited one of those wilst taking his recreation. [T]here at an instan the earth began a tremendous trembling and he with

difficulty made his escape when an explosion took place resembling that of thunder" (Haines 1977).

INTRODUCTION

Reports like these—the first being an entry from the Lewis and Clark expedition journals and the second being the first-known written account of Yellowstone's geothermal features—initially captured the nation's imagination and established the Yellowstone region as a special—even charismatic—place (Runte 1987, Haines 1977). In 1872, faced with mounting public sentiment to protect these unique natural assets, Congress showed unusual foresight by designating Yellowstone as the nation's first national park, thus permanently enshrining it as a

¹The punctuation in the two extracts has been altered from the originals for the sake of clarity. *Ed.*

place of transcendent symbolic importance in conservation circles (Wright 1992, Chase 1986). Since then, a series of events significant in conservation history has affirmed the Yellowstone region's prominent role in the development of natural resources policy: the establishment in 1891 of the Yellowstone Timberland Reserve as the nation's first national forest just east of the park in what is now the Shoshone National Forest (Frome 1984), the lengthy struggle to create Grand Teton National Park in the spectacular Jackson Hole country (Righter 1982), and the adoption of a natural-process management philosophy in Yellowstone National Park (Leopold et al. 1963). Not surprisingly, each of these events generated intense opposition, often from local residents who perceived the proposed change as a direct threat to their livelihood or lifestyle.

Today controversy continues unabated in the Yellowstone region. Controversy has surfaced over the so-called vision document, fire policy, wolf reintroduction, bison management, geothermal protection, oil and gas leasing, timber harvesting practices, hard-rock mining proposals, and appropriate levels of development of recreation and tourism, to name just a few of the myriad matters recently in the news (Clark and Minta 1993, Goldstein 1992, Keiter and Boyce 1991).² The public attention directed toward these high-profile issues ensures that the charismatic Yellowstone country—now commonly known as the Greater Yellowstone Ecosystem—will continue to serve as a principal testing ground for natural resources policy (Wilkinson 1992b). With the region now being seen as an interconnected ecological entity, the focus is on ecosystem management, which is itself a controversial proposition (Grumbine 1992, Keiter and Boyce 1991). Greater Yellowstone provides a quintessential setting for testing the concept of ecosystem management, and it already has provided some important early lessons.

Western natural resources policy is formulated in three principal institutional settings: the legislative, executive, and judicial arenas. In fact, natural resources policy is developed, implemented, and interpreted through a complex, and often complementary, interplay among these institutions, which can be engaged at the federal, tribal, state, and local levels. Increased opportunity for public participation is an important development in contemporary natural resources policy: it allows interested citizens and organizations to inject public values into the decision-making process, and it enables them to probe underlying scientific and economic assumptions

²Every one of these controversies has generated at least one—and often several—lawsuits. At last count, bison management was leading with seven different lawsuits in the past eight years (Keiter and Froelicher 1993).

(Keiter 1990). Within this institutional setting, because virtually any change in the status quo is contentious, “losers” regularly seek to escalate the conflict to another level. Most policy decisions, therefore, will be made, or at least confirmed, in a political realm, where the final resolution usually turns on a question of values. In the Greater Yellowstone ecosystem management debate, with charismatic, nationally significant resources at issue, this almost certainly means that Congress will be the final arbiter, though this fact cannot—and should not—undermine efforts to achieve local consensus.

GREATER YELLOWSTONE: JURISDICTIONAL AND ECOLOGICAL FRAGMENTATION

The Greater Yellowstone Ecosystem—or the Greater Yellowstone Area as the federal land management agencies prefer to call it—consists of two national parks, seven national forests, three national wildlife refuges, and other interspersed federal, state, and private lands, located in three different states—Idaho, Montana, and Wyoming (Figure 1). Yellowstone and Grand Teton National Parks, at the core of the ecosystem, are managed by the National Park Service under a preservationist mandate (16 U.S.C.S. §§ 1, 22, 406d-1 [1991]). The National Elk Refuge, Red Rock Lakes National Wildlife Refuge, and Greys Lake National Wildlife Refuge, which provide critical habitat for several prominent species, are managed by the U.S. Fish and Wildlife Service under a permanent conservation standard (16 U.S.C.S. § 668dd [1991]). Approximately 50 percent of the surrounding national forests are designated as wilderness and are also managed for preservationist purposes (16 U.S.C.S. §§ 1131, 1133 [1991]). For the most part, natural processes prevail on these lands; human intervention is frowned upon and minimized (Goldstein 1992, Keiter 1989).

A quite different philosophy prevails on the other Greater Yellowstone lands, where management authority is even more dispersed. The U.S. Department of Agriculture (USDA) Forest Service manages the remaining national forestlands under a multiple-use mandate, which allows such activities as mining, timber harvesting, grazing, and motorized recreation (16 U.S.C.S. § 528 [1991]). These forestlands are managed intensively to provide goods and services for human consumption. Outside the national parks, wildlife-management authority on federal lands is shared with the states, though the Endangered Species Act displaces state authority in the case of the six listed species found locally (16 U.S.C.S. § 1535[f] [1984]; see generally Coggins & Ward, The

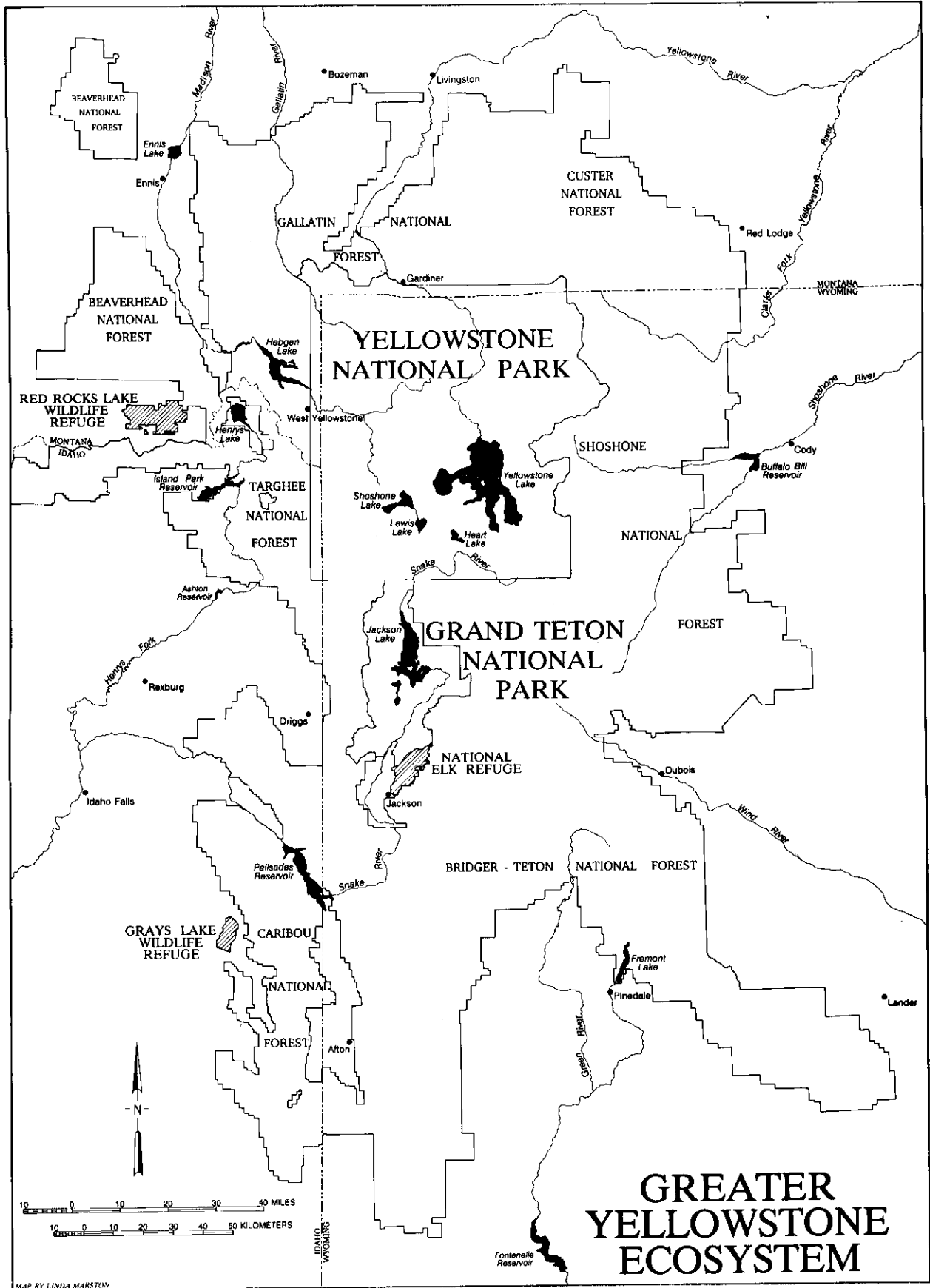


Figure 1. Map courtesy of the Greater Yellowstone Coalition.

ers agree that several common ecological features—including grizzly-bear habitat, ungulate range, geothermal aquifers, vegetation patterns, and watersheds—provide a framework for defining a Greater Yellowstone Ecosystem (Clark and Minta 1993, Glick et al. 1991). Of course, any suggestion of exactly where ecosystem boundaries should be drawn immediately stirs concern. Scientists and environmentalists assert that ecosystem processes are dynamic and cannot be confined by static boundaries (Patten 1991), while commodity interests and many local residents see ecosystem-based boundaries as an expansion of federal authority and constraining regulations (Budd 1991).

Many observers also believe that the ecosystem suffers from fragmentation, often the result of intensive development pressure and related road construction, as well as escalating private-land development (Glick et al. 1991, Congressional Research Service 1986). While individual timber sales, oil-exploration ventures, or ski-resort proposals do not portend ecological disaster, the cumulative effect of serial development projects, along with continued incursions into areas that currently have no roads and the unrelenting subdivision of private lands, is dramatically altering the landscape to the detriment of wildlife and natural processes (Glick et al. 1991, Keiter 1989). In other words, the growing presence of people poses a very real threat to the regional ecology.

Many residents, however, view any commitment to a management philosophy giving ecosystem processes priority over human interests as a threat to local communities and economic needs. The National Park Service's policy of permitting brucellosis-exposed bison to roam freely is seen as a threat to local ranchers and to state cattle industries (Keiter and Froelicher 1993, Thorne et al. 1991); a fire policy that permits natural fires to burn is seen as a threat to local property owners and to businesses, who recall that the 1988 fires destroyed private cabins and severely truncated the summer tourist season (Varley and Schullery 1991); and wolf restoration is seen as a threat by local ranchers who are concerned about predation and by the extractive industries who fear the restraints that might be imposed under the Endangered Species Act (Mech 1991, Keiter and Holscher 1990). These same individuals, however, have long understood that the national parks and their resources are linked inextricably to the economic welfare of the gateway communities, as illustrated by Cody, Wyoming's, long struggle to prevent Yellowstone officials from closing the Fishing Bridge campground (Keiter 1989, Chase 1986). The challenge, therefore, is to devise functional policies that protect the region's ecological integrity while also ensuring stable communities and economic opportunity.

ECOSYSTEM MANAGEMENT: LESSONS FROM GREATER YELLOWSTONE

Across the public domain, federal land managers—fully cognizant of the impact ecological fragmentation is having on biophysical resources and equally well aware of the fragmented political/jurisdictional environment in which they operate—have endorsed the concept of ecosystem management as a guiding resource management principle (Salwasser et al. 1987, Newmark 1985). The National Park Service, the U. S. Fish and Wildlife Service, the Forest Service, and the Bureau of Land Management have each now openly embraced the concept. State resource management agencies, as reflected in California's interagency biodiversity conservation initiative, have also endorsed the concept (Grumbine 1992). Nonetheless, confusion and uncertainty persist over how ecosystem management should be defined and what it means in practice. The Forest Service evidently views it largely as a process for integrating contemporary forestry research with public values to set management priorities. Others view it more as a concrete set of substantive limitations on managerial prerogatives designed to minimize disruption of natural ecological processes.

Although ecosystem management has not yet been fully defined, the concept itself rests upon several widely shared propositions. These include the following: (1) ecosystems are dynamic, inherently unstable, and cannot be easily defined in conventional jurisdictional terms; (2) all ecological components or species merit consideration to protect interrelationships, linkages, and evolutionary processes; (3) human communities must be considered part of the ecosystem with management policies geared toward sustainable development compatible with ecosystem health; (4) sophisticated scientific knowledge and monitoring are necessary to develop management objectives, measure progress, and make adaptations; and (5) management proposals must be devised and evaluated using an ecologically appropriate time scale (Commission on Research and Research Management 1989, Agee and Johnson 1988). In short, ecosystem management requires that natural resources policies be framed at the appropriate spatial and temporal scale to meet human needs without undermining the ecological integrity of underlying resource systems and processes.

In Greater Yellowstone, several important dimensions of an emerging ecosystem management policy can now be identified. First, ecosystem management is built upon cooperative interagency institutional structures, as well as public involvement and support. Second, ecosystem management draws heavily

upon scientific principles and research; it requires an improved understanding of ecological systems so that management proposals can be designed to minimize disruption of natural processes. Third, ecosystem management is committed to preserving and restoring biological diversity within regional fauna and flora. Fourth, ecosystem management policies must manifest broadly shared public values, which means that aesthetic concerns and amenity values ordinarily should be given priority in areas where public lands have been set aside for parks and wilderness. Finally, ecosystem management should promote sustainable resource-development activities compatible with underlying ecological processes to ensure viable local communities and economic opportunities (Keiter 1994, Clark and Minta 1993, Keiter and Boyce 1991).

Thus far, the principal approach to ecosystem management in Greater Yellowstone has been to promote interagency coordination. In the mid 1980s, spurred by the threat of congressional intervention, the National Park Service and the Forest Service undertook a high-profile coordination process to improve regional resource management decisions. Acting through the Greater Yellowstone Coordinating Committee (GYCC), an umbrella group composed exclusively of federal land managers, the two agencies aggregated individual park- and forest-management plans into a profile of the region to identify shared resources as well as managerial disparities (Greater Yellowstone Coordinating Committee 1987). The GYCC then undertook to prepare a *vision document* to establish a future framework for managing the region. The proposed vision document was intended to produce a set of guiding principles for coordinated management that would then provide the basis for amending regional guides, forest plans, and general management plans. This *vision process* was expected to establish Greater Yellowstone as a "world class model" for integrated, coordinated natural resources management (Clark and Minta 1993, Goldstein 1992, Keiter and Boyce 1991).

The seventy-two-page draft vision document, when released for public comment, represented a remarkably far-reaching statement of federal conservation policy. In fact, the draft vision document offered considerable evidence that the National Park Service and the Forest Service—through this unprecedented coordination effort—were committed to managing Greater Yellowstone as an ecological entity. Openly acknowledging that the proposed coordinating criteria "represent new ways of doing business," the vision document provided expressly for ecosystem management and envisioned "a landscape where natural processes are operating with little hindrance on a grand scale . . . a combination of ecological processes operating with little restraint and humans moderat-

ing their activities so that they become a reasonable part of, rather than encumbrance upon, those processes" (Greater Yellowstone Coordinating Committee 1990). Upon seeing this overt endorsement of ecosystem management as well as language that might be interpreted to restrain extractive activities on multiple-use forestlands, and upon concluding that the vision document process could be adopted elsewhere on the public domain, the consumptive-use industries and related interest groups mobilized to undermine the process (Barbee et al. 1991). They showed up in force at scheduled public hearings to denounce the document and process, and they enlisted local congressional delegations to dilute the document without openly subverting the process (Goldstein 1992, U. S. House of Representatives Staff Report 1992).

Not surprisingly, the final document represented a pale version of the original draft, and the entire process has left Greater Yellowstone's immediate future clouded. Reading more like a bureaucratic memo than a visionary statement of natural resources policy, the eleven-page framework document reinforces the separate missions of the two agencies and contemplates little noticeable change in existing management policies (Greater Yellowstone Coordinating Committee 1991).³ While articulating the noteworthy goal of maintaining functional ecosystems, the framework document does little more than acknowledge a need to understand better ecological repercussions that cross administrative boundaries. Gone is any language about ecosystem management or about preserving a sense of naturalness. No new institutional structures or procedures are in place to facilitate interagency coordination. Moreover, there is little evidence that the agencies are relying upon the document. The current bison-brucellosis controversy has thus far been addressed with no reference to the framework-document principles, though federal and state agencies are actively working together to find an acceptable solution (Keiter and Froelicher 1993). Similarly, one searches the Shoshone National Forest's Final Oil and Gas Leasing Environmental Impact Statement in vain for any reference to the framework document, interagency coordination, or functioning ecosystems (USDA Forest Service 1992). And it remains to be seen whether the framework document will directly influence forest plan revisions or national park planning.

What happened and what are the lessons? First, because the vision process was initiated by congressional prodding and because the Yellowstone region boasts charismatic resources of national significance,

³The document, however, does provide for no net increase in the total mileage of open roads in the national forests and national parks (Greater Yellowstone Coordinating Committee 1991).

the GYCC made a tactical error by not pursuing the vision document as a national initiative.⁴ By keeping participation at the local level, the GYCC either ignored or did not recognize the potential power of vested local interests, and it was then unable to counteract this local pressure by calling upon a national constituency. Second, the GYCC's limited composition, which consists only of representatives from the National Park Service and the Forest Service, left it vulnerable to the charge that it did not represent local interests, and it was, therefore, unable to forge a mutually shared vision for the region or to garner necessary local public support (Freemuth and Cawley 1993). The GYCC's limited composition also subjected it to criticism from other federal agencies, thus undermining the impression that the vision document presented a unified federal policy. While these two observations might appear contradictory, an effective and enduring ecosystem management policy in Greater Yellowstone's fragmented jurisdictional environment must reflect some level of consensus between national and local interests, though irreconcilable conflicts ultimately must be resolved with reference to the national interest.

Third, by consciously choosing to ignore the National Environmental Policy Act (NEPA) process in order to bring the vision process to fruition promptly, the GYCC left itself open to the criticism that it did not adequately involve the public in the process (Goldstein 1992). While full NEPA-style evaluation for such an undertaking might be clumsy, expensive, and time consuming, it would have undercut any charges of procedural unfairness and focused the ensuing debate on substantive land- and resource-policy objectives. Fourth, it has been suggested that the vision process failed for lack of a clear problem definition at the outset (Clark and Minta 1993). By defining the problem that the GYCC was addressing simply as a lack of coordination, each constituency was effectively encouraged to identify its own pet peeves as "the coordination problem," which may or may not have coincided with the committee's perception of actual regional problems. Lacking any consensus at the outset, the likelihood of forging a mutually shared vision for the future was virtually nonexistent.

Of course, the GYCC cannot shoulder all of the blame for the vision document imbroglio. Scientists and environmental organizations have been the principal proponents of ecosystem management in Greater Yellowstone and elsewhere. While scientists can provide vital information necessary to understand ecological processes and the relationships between

these processes and human activities (Keiter and Boyce 1991), environmental and other organizations must be prepared to mobilize public support and to supply the political muscle necessary to bring such fundamental change to fruition. Federal agency officials are ill positioned to engage in such activities, though they can and should be actively involved in educating the public about ecological realities. In the case of the vision process, national environmental groups, for whatever reason, did not aggressively support the initiative, making it difficult both to elevate the issue to the national level and to secure needed congressional support (Goldstein 1992, Barbee et al. 1991). Support from environmental groups for the document could have provided a significant gain—though perhaps an ambiguous one—for the environmental community, but it seemed unwilling or unable to figure out how to respond effectively once the draft vision document adopted much of what it advocated. As a result, the final vision document was not an ecosystem management manifesto.

In sum, several important lessons can be gleaned from the Greater Yellowstone vision process. One lesson is that federal agencies cannot expect to implement ecosystem management programs alone; they must involve other affected federal, state, and local agencies and officials. In appropriate circumstances, this inclusion may mean a seat at the table rather than a consultative role. Another lesson is that resource managers must be prepared from the outset to engage fully the public in a clearly defined process. Moreover, in a charismatic ecosystem like Greater Yellowstone, both national and local interests must be included and accommodated to create a workable ecosystem management policy.

BEYOND THE VISION DOCUMENT

Two related and particularly troublesome political developments surfaced in the aftermath of the vision process. Recurrently, federal land managers have been criticized—justifiably in many cases—for their insularity and unwillingness to engage in matters beyond their borders (Sax and Keiter 1987). At the same time, these managers are regularly chastised by others for extending themselves outside jurisdictional boundaries to address critical environmental matters (Budd 1991). In the case of the Greater Yellowstone vision process, the National Park Service and the Forest Service showed real institutional courage in venturing beyond their boundaries and undertaking an unprecedented interagency coordination effort, even if the results ultimately proved disappointing. The National Park Service regional

⁴There is some evidence, however, that high-level Department of the Interior officials vetoed a GYCC proposal to schedule out-of-region hearings (U.S. House of Representatives Staff Report 1992).

director, however, paid a heavy personal price: she was involuntarily transferred to the East Coast, evidently for her role in the vision process, and has now initiated litigation against the government (U.S. House of Representatives Staff Report 1992). In addition, the Forest Service's northern region forester, who also participated in the vision process, was also involuntarily reassigned, though his apparent transgression was an inability or unwillingness to meet timber targets at the expense of environmental concerns (High Country News 1991). Taken together, these two personnel moves, which were initiated at the highest levels of the National Park Service and the Forest Service, conveyed a strongly negative and unfortunate message to local land managers inclined to pursue progressive resource management policies.

Moreover, after investigating these personnel moves, a recent congressional staff report concludes that the vision process was purposefully undermined by top-level political officials to protect local constituent group interests (U.S. House of Representatives Staff Report 1992). Given the Yellowstone region's charismatic qualities, this revelation should not come as a surprise. In Greater Yellowstone, natural resources policy—whether progressive or regressive in content—is being shaped both at the local and at the national levels. In a related development, federal courts in the Pacific Northwest have uncovered evidence of similar high-level political intermeddling in the spotted-owl controversy (Portland Audubon Society v. Endangered Species Committee, 984 F.2d 1534 [9th Cir. 1993]; Seattle Audubon Society v. Evans, 771 F. Supp. 1081 [W.D. Wash. 1991], *aff'd.* in part, 952 F.2d 297 [9th Cir. 1991]). Again, this revelation probably should not come as a surprise; it reconfirms the limitations of science in the policy arena, which is ultimately a political setting where values and science are melded together (Keiter and Boyce 1991). However, the unfortunate side effect of these revelations is to destroy the trust and openness necessary even to begin seeking consensus solutions to ecosystem-wide problems at any level.

With Yellowstone National Park and the surrounding environs now joined as one under the evocative image of the Greater Yellowstone Ecosystem, natural resources policy simply cannot be established for the region without taking both national and local interests fully into account. At the national level, Greater Yellowstone is widely treasured for its natural attributes, including its geothermal features, abundant wildlife, open spaces, and recreational opportunities, not for its commodity resources or economic-development potential. Congress seems close to passing the Old Faithful Protection Act, a law that would protect Yellowstone's geothermal features from proposed development on adjacent private lands

(Keiter 1993). Moreover, Congress is considering far-reaching reforms to several resource management laws, including the Mining Law of 1872 and grazing and timber subsidies, that could affect priorities and incentives in Greater Yellowstone and elsewhere (Wilkinson 1992a). Ever since assuming his post, Secretary of the Interior Bruce Babbitt, who is no stranger to Western natural resources controversies, has been speaking in terms of ecosystems and sustainable natural resources policies (Land Letter 1993)—ideas that are now at the heart of ecosystem management in Greater Yellowstone and elsewhere. In addition, the Greater Yellowstone Coalition, a major regional environmental organization, has now called for congressional passage of a Greater Yellowstone Ecosystem Conservation Act to protect ecologically important public lands and to provide incentives for private conservation efforts (Harting and Glick 1994).

Nonetheless, a functional Greater Yellowstone ecosystem management policy also must take account of regional, state, and local concerns, which have often embraced an agenda at odds with the national one. Besides the obvious reason that our democratic system is built upon the notion that people are entitled to exert control over their own destinies, local involvement is critical to address the vexing problem of private-land development, which is now spinning out of control in many locations under the twin pressures of industrial tourism and second-home development (Glick et al. 1991). Even though each of the three surrounding states still depends heavily upon extractive industries and agriculture, and even though the Yellowstone region will continue to be a critical testing ground in the ongoing conflict between environmental and commodity groups throughout the West, there is some evidence of an evolving local consensus on the region's future. Mounting scientific evidence of accelerating habitat loss and fragmentation and recent economic data revealing the declining role of commodity production in the regional economy are inexorably driving even recalcitrant local interests to acknowledge the need for a strong commitment to protect the region's ecological integrity and to begin to explore what that may mean. Various local initiatives, including numerous county, town, and citizen comprehensive planning efforts throughout the region, provide additional proof of this evolving consensus (Glick et al. 1991).

CONCLUSION

Although the high-profile Greater Yellowstone vision process—the federal land management agen-

cies' first major foray into the uncertain realm of ecosystem management—may not have borne the fruit that proponents originally contemplated, expectations may have outpaced reality. In a charismatic ecosystem like Greater Yellowstone, bold regional initiatives can and should be expected to serve as a lightning rod for controversy, particularly when the underlying concepts of ecosystem management remain ill defined and easily misunderstood. Nonetheless, the interagency coordination process has legitimized the notion that Greater Yellowstone is an integrated ecological entity and that management policies must take account of ecosystem realities. Ecosystem management proponents, therefore, should now promote these two notions at every opportunity, perhaps on a smaller scale in Greater Yellowstone and elsewhere, to give clear definition and meaning to the concept of ecosystem management. Moreover, they must demonstrate how adherence to ecosystem management principles can achieve the twin goals of ecological and economic sustainability.

Firmly rooted in the compelling logic of science, the ecosystem management concept also has a powerful metaphorical ring that resonates in public forums. Indeed, because natural resources policy ultimately is shaped through an open public dialogue in a political arena, the ecosystem management concept may have its greatest impact at this level. It can enable people to understand the full dimensions and complexity of contemporary natural resources management dilemmas, and it can help generate support for management at the appropriate geographic level and time scale. It can also help people understand that change is endemic in both natural and human systems; and just as the ecosystem concept takes into account the dignity of all species, man must construct ecosystem management institutions, processes, and standards that dignify all individuals by integrating human concerns into the equation. A full complement of diverse ecosystems can then thrive alongside sustainable human communities.

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Beauty and the Beast—or How the Economy/Environment Debate Is Killing the Colorado Plateau

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Abstract

The Colorado Plateau, an area covering roughly 130,000 square miles in southwestern Colorado, southeastern Utah, northwestern New Mexico, and northeastern Arizona, is under siege by changing economic, social, and environmental factors. These changes have divided institutions and communities in a battle over economic development and environmental protection. The resulting loss of trust has too often led to gridlock and stagnation. Community-based decision-making is needed to guide the region toward an ecologically and environmentally sustainable future. This process requires increased cooperation among communities, land management agencies, and the region's land-grant universities.

INTRODUCTION

Sam Taylor, the gruff old editor of the *Moab Times Independent* and long-time Utah highway commissioner, loves to tell the story of the Civilian Conservation Corps crew that was building the first real road up the narrow hogback in Garfield County between Escalante and Boulder. It was midday and they were shoveling and leaning, shoveling and leaning when an old cowboy came riding up out of a draw. He sat there on his horse just watching and waiting until the sergeant in charge of the crew couldn't stand it any longer and walked over to see what he wanted. "Nothin'," says the cowboy. "Just wondered what you fellows was doin'."

"We're building a road to Boulder," says the sergeant proudly. After the cowboy just sits there and watches and doesn't say anything for a while, he adds, "You got a problem with that?"

"Well," says the cowboy thoughtfully, taking off his hat and scratching his head, "I think you fellows got it wrong. What we need is a road *from* Boulder."

This story is told for a couple of reasons. First, it illustrates the contrary nature of folks on the Colorado Plateau, whether people have been there for five

generations or just arrived last week. You don't find many people there who don't have an opinion and, as they say nowadays, an attitude. There may be a spell that the Colorado Plateau casts on people. It claims them in a special way, and in turn they claim it as their own and want to guard it for their own purposes. That may seem an odd attitude to have about a place so huge—130,000 square miles—so rugged, so remote, and so sparsely populated—fewer than a million and a half permanent residents. But this kind of land takes a lot of space to make a living and a lot of room to satisfy the need for the personal refreshment we call recreation (Figure 1). We have developed neither the social skills nor the land ethic necessary to share this land in peace.

The second reason the story is told is that we are still, today, arguing about roads on the Colorado Plateau—and about tortoises and wilderness and water and cows and mountain bikes and almost any other natural resource issue you can think of. These issues have not been settled—not yet.

The arguments are costing us, and the Colorado Plateau, dearly. The arguments appear to rise from a polarization of thinking that we frequently describe as the economy-versus-environment debate. That debate is particularly intense in the West and on

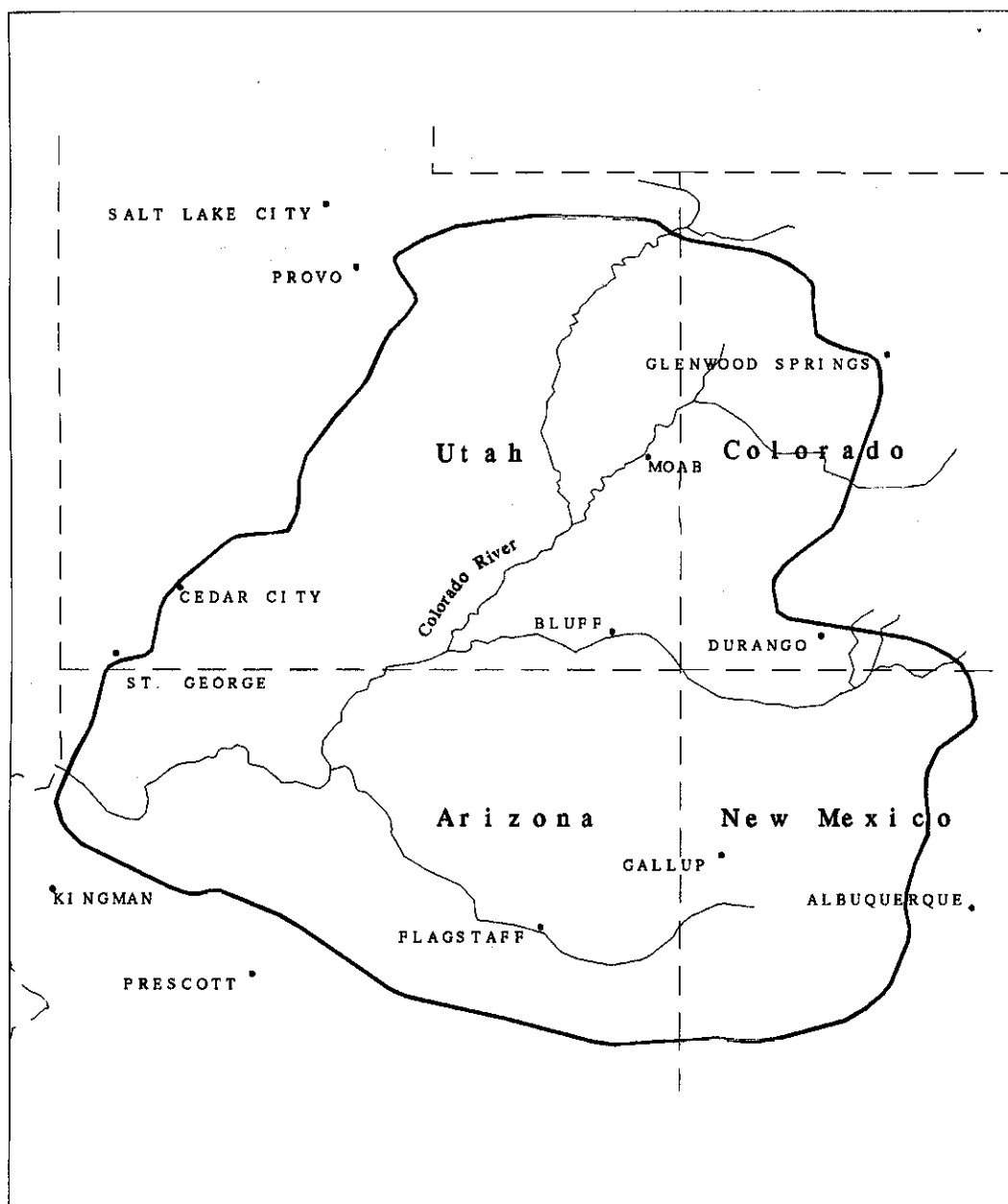


Figure 1. The Colorado Plateau.

the Colorado Plateau because more than half the land—in many counties over 80 percent—is publicly owned. There the benefits that may accrue to each of us, whether they are jobs, dollars, personal pleasures, or spiritual uplift, come from places that are *ours* but that we perceive as *mine*.

This matter of perception makes the debate very frustrating. Agreement must start with understanding. If I perceive *beauty* to be untrammelled landscape and the *beast* to be a developer driving a D9 Caterpillar, I will not be well understood by someone who believes beauty to be a regular paycheck, a comfortable home in the town in which he grew up, and nice neighbors. That person also believes the

beast to be an ugly and apparently useless animal whose protectors have caused him to lose his job.

Agreement also requires a sense of equity in the debate. When we feel powerless, we tend to be defensive. Someone may ask the lion to lie down with the lamb. It may even happen, but the lamb doesn't usually get much sleep.

When arguments and perspectives are out of balance, it is always much easier to wreck the train than it is to get the railroads to run on time. Today on the Colorado Plateau, we are quite talented at creating train wrecks. This tendency comes from the pace of change and from the inadequacy of our institutions to adapt to that change.

CONFLICTS ON THE PLATEAU

There are fundamental changes occurring on the plateau. There is an economic change. The marketplace has been affected by resource depletion, technological advancement, global competition, the uncertainty of both capital and publicly funded support, and a shift in the number and kinds of jobs. There is an environmental change. We have moved from a position of little concern to one in which draconian legislation and complex rules are contributing to gridlock as much as they are to problem solving. There is also social change. As political power and priorities are shifting, we are discovering that command-and-control approaches only replace patronage, exclusion, and exploitation with run-amok bureaucracy.

We are faced with developing and adapting to different resource economics that blend market motivations and public responsibility. We are faced with the need to reshape our institutions to integrate new concepts, such as ecosystem management, with economic uses of both commodity and amenity resources; and we are faced with an urgent need to develop more effective, cooperative decision processes.

I am greatly influenced in my opinion of what is needed by some thoughtful Westerners such as Daniel Kemmis, Frank Gregg, Ed Marston, and Charles Wilkinson.¹ All of them have stressed the relationship between people and the places they live and the role of communities in decisions. This kind of thinking led to the development of the Grand Canyon Trust's Community Initiatives Program for the Colorado Plateau. As we address the changes that are taking place, as we plan for the future of the public lands that dominate the plateau, as we consider the fate and the uses of the natural resources of this area, I believe we are more likely to find success through a process of collaborative community-based decision-making motivated by responsible citizenship and stewardship than we are by escalating the "War on the West."

Following are some examples of the costs of our behavior over the last couple of decades. There are few people on the Colorado Plateau who have not heard of, or who do not have an opinion about, the Burr Trail—a road *from* Boulder, Utah. How many years have we been fighting over whether the Burr Trail should be a maintained gravel road or a two-lane, rural paved road? How much money has been spent? How many lawyers' children have been put through college? How much bitterness has been engendered? I don't know, and I don't want to think about researching it. I'd be afraid of the answer.

I saw an interesting figure one day while I was working with a cooperative local planning project in

Garfield County, Utah. In 1990 the total revenue stream for the county—sales taxes, property taxes, road-maintenance funds, fees, all receipts—totaled just under \$5 million. The largest single piece of that—37 percent of the total, almost \$2 million—was the Burr Trail Grant from the Utah Community Impact Board. Is the road paved today? Partly. Is it passable? Sort of. Will the fight, and the lawyers' fees, go on? Undoubtedly. Is this what we want for a jobs program? I don't think so. Could that money have been better spent, and the money and time of the opponents better invested, in urgent community or park management or other local needs on the Colorado Plateau?

A larger road controversy looms as well—in this case, a road from Mexico to Canada. With major amounts of federal spending at stake, the state of Arizona was quick, but not alone, in claiming its right to a North American Free Trade Route. In his State of the State report on January 11, 1993, Governor Symington announced support for a route that followed I-17 north to Flagstaff and then extended it, vaguely, north from there. North from there is the Colorado Plateau and all of the promoters and all of the opponents who will, with blood in their eyes, go to war over if, where, and when such a freeway will be built. With an East/West history of mistakes, ranging over a century from railroads to interstates, you would think we might have learned something about the price of not working these things together ahead of time. It will be interesting to see whether an inclusive regional planning process will happen this time.

Further, what about the most controversial transportation planning decision of all, i.e., the decision not to have any road, or mechanical transport, on a piece of public land—the designation of wilderness? What is the adamant antagonism over Bureau of Land Management (BLM) wilderness designation in Utah costing us, and what will it cost before it is over?

The Coalition for Utah's Future Project 2000 "Honest Broker" effort is working to bring together the full array of interests in the state to see if agreement can be reached on a BLM wilderness proposal. The process is very slow, and the future of this effort is in doubt. The reason is simple. Folks don't trust one another a whole lot. Just think of what that failed trust has cost.

When trust fails, lawyers thrive. I suppose a wonderful goal for the Colorado Plateau would be to put all natural resource lawyers out of business—water lawyers, environmental lawyers, mining lawyers, real-estate lawyers—but that would be unfair to lawyers. They are a symptom, not the disease. When you start resorting to lawyers to solve problems, funny things happen.

Here is another road issue. In Utah, counties are

threatening legal action to prove the existence of RS2477 roads, i.e., roads to and through federal land that once appeared in the county records and that, they insist, have at some time been maintained. Why? So that the presence of a road might preclude the designation of wilderness. At once ironic and frustrating, in the neighboring state of Colorado counties, pushed by landowners who want to prohibit public access to public lands across old abandoned roads, have gone to court to deny the existence of RS2477 roads by claiming that the county never really maintained them. Lawyers are indispensable for this sort of thing.

FINDING COMMON GROUND

This lack of trust, this fear of one another's motives, underlies much of the economy/environment debate on the plateau today. It seems to be an unbridgeable gulf at the federal, and often at the state, level. Even in our communities, the parties tend to line up on opposite sides of meeting rooms and yell at one another. The odd thing about it is that this conflict doesn't very often exist at the personal level. Inevitably, a person taking the economic side in the debate will claim with some fervor, "Look, I'm an environmentalist. I care about this land. I have all my life."

Equally true, the folks taking the other side have to have jobs, buy groceries, earn a living, save for retirement, and otherwise be engaged in economic activities. In fact, each of us combines economic and environmental considerations in the decisions we make in our daily lives. Some of these are generated by the world around us, some come from within, but they are not either/or decisions. We all must work, feed our families, and buy school clothes for the kids, but we must do that in concert with caring about the quality of our lives and the places we live. Why do we have so much trouble combining these things in our community decisions?

The problem lies in a couple of areas. One is that our social skills and institutions have not kept pace with the technical capability to affect our landscape. Pressure for economic change far exceeds our general capability to adapt to the change. The motivation for change—usually economic—is individually driven, intense, impatient, and fast. The nature of the change affects the quality of life and the environment of entire communities, but the ability to manage the change and adapt to it requires time and patience for communication and understanding. We seem to fall a little short in these areas.

The second part of the problem is the way we

describe the debate to ourselves, dividing the world into two opposing camps. In its most extreme version, this view supposes that there are irreconcilable ideological differences in the way people look at the role of human beings. One is the homocentric ideology based upon a belief that the role of man is to dominate and enjoy the fruits of the earth, that the function of nature is to serve man. The other is the biocentric ideology based upon a belief that man is responsible to nature, that his role is to serve as a steward of the earth. If such beliefs are held as a matter of faith, independently of logical argument, there is no good starting point to resolve differences about things like protecting endangered species. However, my conversations with people on the Colorado Plateau lead me to believe that this ideological impasse is a simplistic intellectual construct and does not reflect the thinking of most people.

Nonetheless, the way that we approach resource debates, nationally or locally, does not lend itself to finding commonality of interest. Traditional public participation, such as public hearings, typically results in much shouting and not much hearing. Communities divide into two camps, and boosterism wars with protectionism. Unfortunately, controversies expressed in inaccurate metaphor are the stuff of modern media. When extremism is not only newsworthy but dominates the news to the extent that special-interest strategists vie for the most confrontational sound bite, the lunatic fringe becomes wrapped in a mantle of normality. We are all aware of People for the West and Earth First! and are sadly ignorant of the Escalante Action Team or the Farmington River Reach Foundation or hundreds of other groups calmly working to bring a quality environment to their communities in concert with sustainable economic prosperity. The cameras focus on the unwashed spiking old-growth trees and on the unshaven spiking spotted owls.

Stewart Udall and W. Kent Olson, in a *Los Angeles Times* column (1992), labeled the so-called "wise use movement" the "MeFirst!ers," which is a fair assessment of the homocentric extreme; but you have only to read Rod Nash's *The Rights of Nature* (1989) to understand how far the "tree firsters" have gone in the direction of biocentrism.

We need to understand this prime-time simplification for what it is—the edge effect of our fear, unease, and mistrust of one another. In reality what we find in places like the Colorado Plateau is a wide range of rural communities where most of the citizens are interested in both their own well-being and in the well-being of the place where they live. They think the me-firsters are greedy and the tree-firsters are mad; and they wish that their politicians, business leaders, public-agency managers, and communities could find ways to solve these problems equitably

rather than exacerbating them.

COMMUNITY-BASED DECISION-MAKING

How do we get out of the bind we are in? How do we deal with the kind of gridlock that is wasting so much time, money, and effort that could be used in productive endeavor? How do we find ways through the mistrust that overwhelms good intentions in public decision-making? I am convinced that in rural areas like the Colorado Plateau the change must come at the community level—in the decisions made by towns, counties, and Indian tribes—and in the places where we work and live. If not there, where will we implement that change? If we want conservation and a fundamental land ethic to guide public-land decisions, doesn't that have to happen in place—in the place? I see no bright future in trying to impose such principles from afar.

To focus at this level is not to ignore the rest of the world—far from it. Look at the nature of the issues that are overwhelming these communities. The issues go far beyond roads and wilderness. We have water issues—from the Animas-La Plata project in Colorado to the allocation and storage of water in the Virgin River. We have endangered-species controversies—from goshawks and spotted owls to desert tortoises. We have waste-management issues, clean-water issues, air-quality issues. We have issues about the impacts of traditional uses like grazing, mining, and logging. We have issues about the impact of new uses like recreation and tourism.

If community-based decision-making is going to play a key role in addressing the interrelated environmental and economic issues that are confounding public land and resource management today, it will take a positive, proactive effort by many of our institutions, not just communities. This effort is beginning to be made. In the last five years, there has been pressure building to make these changes, pressure that is now being released. In the area of public-lands and natural resource management, there has been a repressive lid over innovation and change for the last decade. That lid is now being lifted—and not a moment too soon.

From an economic standpoint, traditional resource commodity production enterprises must adjust to survive. The abundant resources and public-support systems that were the underpinning of much of that economy are gone or going. The number of jobs that will be supported will be a fraction of those supported in the past, and the issue is "where will the capital come from and where will it go?" At the same time, rapid growth in amenity resource-based enterprises

poses significant problems ranging from speculative real-estate values to second-class jobs to getting and keeping capital on the plateau.

Simultaneously, a shift is taking place in the way we look at and understand environmental values. Site- and species-specific protectionism is giving way to biological diversity and ecological sustainability approaches. Integrating these ways of looking at the long-term protection and production of natural resources requires much more of a holistic approach by our institutions than they have had in the past. It also requires more involvement with a broader constituency than in the past. The Bureau of Land Management needs to be much better at routinely working with backpacking college law professors who are concerned about cows, and the U.S. Fish and Wildlife Service needs to be much better at working with real-estate developers who are concerned about tortoises.

Will we, in fact, encourage our institutions to demonstrate the kind of innovation and creative response to change that will enable a community-based decision process to work? What about the role of the public-land managing agencies—BLM, the Forest Service, and the National Park Service—in this context of community-based decision-making? There are places on the plateau where these agencies and their employees are viewed as aloof from their adjacent communities and as wielders of arbitrary power that must either be co-opted or politically outmaneuvered. As long as Smokey Bear is looked at the same way that Lithuanians looked at KGB officers, it would appear that development of community-based decision-making processes may be a little tough. When these agencies are also viewed with antagonism by both environmental and economic interests outside the community, things appear even bleaker. How did this happen to our public agencies?

Originally these agencies operated under two guidelines: (1) a legislative mandate, which was the guidance from the people, and (2) professional judgment, which was exercised by responsible managers of the agency. In the last 30 years, this has changed. The legislative mandate is general and decisions must be considered through an unwieldy process of public participation to more precisely define the voice of the people. Because of the growing complexity of issues, decisions are based upon the work of specialized professionals, many of whom disagree with the direction of management.

The inevitable result of this process is gridlock, with the public-land manager as scapegoat. The gridlock results from this process: reason tells us that there will be different opinions about what agency decisions should be. Simplified, one interest wants decision A and an opposing interest wants decision Z. The public-land manager, not wanting to alienate

one group or the other and bound by law to be responsive to public participation, compromises with decision *M*. No one is pleased, and the decision triggers round after round of appeals, injunctions, and lawsuits that blame the agency for making the wrong decision, i.e., not the one that *A* wanted and not the one that *Z* wanted. The issue is then litigated on the basis of not having crossed all the *t*'s in a cumbersome, bureaucratic process. We then have the gall to complain about a bloated bureaucracy that spends most of its time in the office doing paperwork instead of being out in the field doing real work. How often we forget that in a democracy we get exactly the kind of government we deserve.

Community-based planning offers a way out of this bureaucratic dilemma. The field managers of public-land agencies must become an integral part of a continuing process of planning and adapting and foreseeing future needs within the communities that are intermingled with the public land they administer. This arrangement does not let the communities themselves off the hook. While communities cannot dictate what happens on surrounding federal lands, they can have an important influence on federal decisions—but only if they are prepared to undertake a serious, collaborative effort. The adage that there is no such thing as a free lunch prevails here. The means through which rural communities on the Colorado Plateau can play a greater role in determining the future of the public lands surrounding them is to get involved in the hard work of land-use planning, to develop as communities a vision for the future that they can use to manage the changes taking place within their own jurisdictions, and to accept their share of responsibility to care for all public values on public lands—even at the cost of short-term profits for individuals within the community.

The good news is that these changes are happening. We are seeing them in northern Arizona's Coconino County, where Tusayan, Flagstaff, and other local communities are taking a lead role in working with Grand Canyon National Park in the development of a general-management plan that doesn't believe the world stops at the park boundary. We are seeing it in Montezuma County, Colorado, where the county is taking the lead in working with state and federal agencies to develop a system that will let any one of them have access to the land and to the resource-information bases of all of the agencies so that common and complete data can be used in public decision-making. We may see it in Garfield County, Utah, where three local planning efforts—a county-wide pilot general-management plan, an economic-diversification plan, and a local action team-planning effort for Escalante—may dovetail effectively with the development of BLM's Kanab-

Escalante Area Resource Management Plan.

There are many other efforts under way around the plateau and on other public lands in the West. It is hard to pick up an issue of *High Country News* without reading about these endeavors.

Another dimension of the benign neutrality role that has painted the public-land agencies into a bureaucratic corner has been its depressing effect on creativity and responsiveness. There are signs that that may be changing. Great innovation is needed for these agencies to assure that management achieves the long-term maintenance and protection of the basic productivity of the lands they administer. Fortunately, across the West today we are seeing a growing commitment to ecosystem management by these agencies. This approach seems so simple in construct, but it represents a significant change from the past. It is based upon the idea of sustained yield at its best—the long-term capacity of land and water resources determines the limits of use. Use allocations and levels are products of that determination, not a precedent condition. Practical approaches to managing things like biodiversity are being applied through collaborative, local planning efforts with the joint support of state and federal natural resource agencies in California. Public and private interests are working together in collaborative watershed planning and management projects in Colorado and Montana.

Such approaches are not without their economic impacts, and here again creativity and a willingness to be involved are the necessary components of a successful community-based approach. The crude tools of the past—subsidy and economic protectionism—will no longer serve. Considering the fundamental economic changes taking place in the rural, public-land West, the investment to date by the public-land agencies in research and support for adaptive change has been woefully small. That too is changing, although perhaps not fast enough. The Forest Service is making a substantial commitment through the rural community-development program. Communities like Kremmling, Colorado, are demonstrating that this kind of commitment makes a difference; but much more needs to be done.

A collaborative support effort is vital where management changes are needed because resource-value loss is not acceptable, especially where those changes have economic consequences. A potential example may be a situation in which BLM is requiring grazing-management limits and practices that simply aren't economically possible for a group of small permittees. Here, if BLM takes the lead with community support in working with the permittees to combine their operations into a single more efficient one, the management requirements become practical reality. Change is happening.

There are many institutional changes that would facilitate this idea of community-based decision-making, including a full range of state, local, and regional governmental changes. The most disappointing institutions have been the state universities and land grant colleges in the West. Created with public resources, they were intended to provide the research, the science, the wisdom, and the education that would guide the region as it grew, developed, and changed. They were designed to be leaders in solving the natural resource problems of the day. Not so says Ed Marston in a scathing editorial in *High Country News* on March 8, 1993: "Most of the West's universities and land grants are so cowed, or so trained, that they are nearly useless when it comes to helping solve today's natural resource questions."

There are, of course, individual researchers and professors who are brilliant exceptions; but the fact that they are often castigated by deans, presidents, and state legislatures serves to demonstrate the general rule. The most serious concern, from my standpoint, is the narrow focus of most study and research. Designed to serve a traditional clientele, its goal is to solve yesterday's small problems tomorrow rather than to encourage interdisciplinary study to solve tomorrow's big problems today.

A serious difficulty facing local leaders who are pushing for community-based planning is the lack of readily accessible, objective data about natural resources and resource processes, i.e., solid information on cause and effect relationships, both in terms of resource impacts and economic consequences. There are bits and pieces of help available, usually specialized, and very little of it is designed to realistically facilitate the local management of change much less to resolve the friction between economic and environmental concerns where communities and public lands interact.

The answer may lie with the state and federal natural resource agencies, particularly the federal land management agencies. The availability and direction of contract funding from these agencies will do much to encourage the Western schools to play a part in the changes now under way. The federal agencies must look to communities as partners in the process of change if we are to make progress on breaking this very expensive gridlock. For the com-

munities to be effective in that partnership, they need quality information and support. Who better to develop and provide that information than the Western universities, not as narrow technicians who resist change but as full-service, multidisciplinary, objective analysts and support-team members?

CONCLUSIONS

A new road is being taken. It will be a key part of a new collaborative spirit that surely will benefit our public lands and resources and our small communities on the Colorado Plateau. In a sentiment that Sam Taylor would probably echo, we need a way both to and from Boulder.

We would do well to consider still another perspective about beauty and the beast. In the Navajo tradition, beauty is harmony—harmony with the world, with the land, and with one another. Perhaps the beast is in us, in our failure to strive for that harmony.

The economy and the environment are neither beauty nor beast, and we must stop treating them as though they are. They are simply descriptions of the whole reality that we live with, in, and by. To treat them as polar opposites engages us in fruitless debate in which we waste the energies that could be better put to use as we strive as individuals and as communities to achieve harmony.

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Common Ground

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Abstract

The cases presented during the second day of the symposium highlight the emergence of ecosystem and community as sources of common interest, innovation, vision, and trust in human relations and their mesh with ecological possibilities. The cases display as well the large opportunities for mutual learning in the search across America for means to accommodate differences and to achieve common ends. Resource managers have a unique opportunity and obligation to advance the search and the lessons it provides.

The case studies presented during the symposium provide hope that we can move beyond the deadlocks that have diminished prospects for conflict resolution and natural resources sustainability. These studies illustrate opportunities that were not part of the discourse and would not have been discussed with such subtlety even a few years ago. They break with the habitual confinements of ideology and jurisdiction, not in a sense of rejection or concession but of possibilities beyond those allowed public consideration. These possibilities arise in a fresh sensibility to people; they arise in the emergence of *ecosystem* and *community* as core concepts of resource management. The commitment to honesty, candor, and respect returns us to fundamentals that resource professionals have buried beneath technical and jurisdictional concerns for too long.

The cases presented during the symposium address a common question. How can human and ecological dynamics relate more productively despite structural barriers to adaptation? The cases suggest means to transcend the brittleness of relations structured to suit the pressures and possibilities of earlier times. They do so in ways that display opportunities for comparative learning and greater adaptability in the future. Following is a thematic summary of these means and the opportunities they create for learning and adaptation.

This paper was presented as the summary of the second day of the symposium. *Ed.*

ECOSYSTEMS AND COMMUNITIES

The cases all demonstrate the search for means to match human interests and ecological possibilities in mutually enhancing ways. Several focus on unique ecosystems under threat; the Pinelands and Yellowstone are examples. Others, particularly the Colorado Plateau, focus on unique communities that are also endangered by forces far beyond their control. Between these unique extremes lies a range of the more common situations in which ecological and community qualities merge in complex and less obvious ways.

Conflicts in resource management indicate stress between what people want, what ecosystems can provide, and how powers and authorities selectively channel influences between the social and ecological realms. Our cases, for example, display responses to stress between integrated ecosystem functions and fragmented powers that affect them, between the scale of an ecosystem and the boundaries that define who controls it, and between the extent of social interests in ecosystems and the selectivity of access to them. The cases describe searches for means at once to reduce these stresses and to increase human commitments to long-term ecological viability. For want of better terms, I would suggest that the search is for (1) improved opportunities for exchange among interests in an ecosystem, (2) trust among these interests, and (3) shared vision. The cases display the ranges of possibility of exchange, trust, and vision,

and of the consequences of their absence, providing excellent opportunities to learn by comparison along these three dimensions.

EXCHANGE

How is a unique place sustained amid more expansive forces that will change it? We have relied historically upon legal fences to accomplish this. The fences around indisputably unique places—Yellowstone,¹ Yosemite—have been thick. Those surrounding areas that are not unique—Mt. Diablo,² the Lolo,³ a parcel of the Northern forests,⁴ a community on the Colorado Plateau⁵—have been less exclusive. In all cases, however, the fences were intended to withstand the pressures of their times; they no longer suffice. Moreover, the definition of *place* has come to embody larger systems—watersheds, habitats, regions—than the fence lines contain. It has come to include social meaning that, although always important in reality, rarely has been acknowledged in professional and policy arenas. There has emerged a clear need for means to relax the forces that press boundaries, to reorient these forces to sustain the values of a place, and to ease the attainment of cross-boundary interests. The presentations given in this symposium provide valuable lessons about what does and does not work in different circumstances.

The Pinelands National Reserve⁶ is a classic example of coordinated incentives and controls that distribute external forces on a place in ways that sustain rather than sacrifice its qualities. The system bounds ecological zones and prescribes differential intensities of use among them. More important, it creates tradable values, currencies, and modes of exchange—among ownerships and jurisdictions, interest groups, and levels of government—that motivate people toward distributions of activity consistent with the desired overall pattern. Political and financial flows of resources prevent unwanted ecological changes by compensating those who otherwise would need to make them.

The Pinelands principles seem to have broader application, in the Sierra and Everglades regions for example. We can ask why they have not been applied elsewhere and in what circumstances and forms they may work. The Greater Yellowstone concept con-

tains similar prospects in circumstances that may be more difficult in some ways—several states, resource-based economies—and perhaps easier in others. The Mt. Diablo case exemplifies situations in which opportunities for exchange were resolutely denied, despite many conditions that seemed to sustain the Pinelands well. Systematic comparison offers opportunity to determine how, where, and to what degree political and financial exchanges can be used to secure the qualities of a multijurisdictional ecosystem.

TRUST

The case of Lolo National Forest illustrates the value of personal relations, as contrasted with political and financial institutions, as modes of exchange for the sustained viability of a region. The personal relations between the administration of the Lolo and the dependent communities and interests surrounding the forest rest on the raw trust that honesty, candor, clarity, and respect have managed to create over time. Trust supports decisions, despite disagreement and doubt, by virtue of personal and professional credit built up through sincere devotion to people's needs. It requires openness to error and its correction, recharge through learning about what actions do and how they affect people. It seems so reasonable a basis for social relations in ecosystems that we must ask why it is uncommon and how changes in personal and professional relations might make it less rare.

Contrasts may help to answer such questions. In the Mt. Diablo State Park conflict, for example, the two sides did not recognize settlement as a mutual interest. Their differences could have been resolved through management strategies that required relatively small concessions by either party, but they chose instead to play an all-or-nothing game. Leadership was a factor: it emerged around special rather than, as in the Lolo, common interests; but contextual factors affect the extent to which particular leadership qualities can emerge and take effect. In contrast with the Lolo, perhaps the stakes in Mt. Diablo were too slight for either side to fear total loss. Perhaps the bifurcation of authority (state) and interest (local) and the absence of third parties encouraged standoff. Perhaps separate strong political alignments led both sides to believe that total victory was attainable. Perhaps Mt. Diablo was merely the small arena for a larger whirl of forces that happened to settle there for the time.

Factors that differentiate the Lolo and Mt. Diablo cases are worth knowing because variants between them rule throughout the West. While the Lolo case

¹See Keiter, page 75.

²See Huntsinger, page 67.

³See Daniels, page 63.

⁴See Harper, page 51.

⁵See Ruch, page 87.

⁶See Moore, page 57.

strengthened the fabric for settlement, the Mt. Diablo example diminished trust as a basis for exchange. In the end, for now, state fences were thickened around a jurisdictional island amid growing subdivisions with the wherewithal to expect to get what they want. If trust will not suffice in these circumstances, perhaps Pinelands-style formal exchanges, e.g., subdivision payments for grazing to reduce fire hazard, are the next steps.

VISION

The Pinelands, Yellowstone, Lolo, and Mt. Diablo cases are examples of working outward from a jurisdictional island to modify and bar larger regional forces that affect it. The Northern forest and Colorado Plateau cases begin instead on the regional scale and demonstrate different means to sustain the viability of a region's places and lifestyles.

The Northern forestlands case uses study to define regional conditions and patterns of interdependence and to identify possible approaches for the region as a whole. A study creates a vision of a system and of how and why it is changing, providing basis for discussion of mutual long-term interests and relieving the pressures of short-term battles. The Pinelands began with a study, as did the concept of the Greater Yellowstone; the Lolo Forest Plan may have served this purpose in its setting. Ordered and credible information can initiate the search for common ground.

There are many other cases in which study has fed conflict rather than eased it, in which information imposes rather than releases a vision. In what circumstances does study work or not? Why? What other conditions must exist if the essential next steps are to be taken? Given our current phase of faith in expert study, these questions have some cogency. Discredit of expertise seems as plausible an outcome as the emergence of vision.

Rather than create a regional vision through study, the Colorado Plateau case searches for it through the eyes and actions of people of the plateau communities. Similar efforts are alive and vibrant these days across the full face of the nation, scattered and separate but consistent with symbols emanating from Washington. We have been through such surges of refreshed democracy before and are too aware of the frustration left in their wake; but the spirit is too important to damp with hard eyes, to treat with "professional eyes." We are challenged to find more beneficial relations between communities of people and the grand forces that shape what they can do, to create openings rather than to control gates, to realize the ultimate power of effective popular interest in

the qualities of life and the ecosystems that sustain it.

The Colorado Plateau communities and the Northern forest lands studies clearly bracket a range of mixed strategies for the attainment of visions that draw the people of a region toward a common purpose. The range includes current efforts in the Pacific Northwest, Northern Lake States, and Sierra regions, to reorient forces on and within resource-dependent regions in ways that are more accountable to and beneficial for their communities and enterprises. We can learn from comparisons across the range, committing ourselves to the personal and professional transformations their lessons suggest.

This comment began with a focus on unique ecosystems—Pinelands, Yellowstone—in the natural and territorial sense. It ends properly with the focus of the Colorado Plateau case: on communities of people, the social equivalents of ecosystems under threat. While the resource professions have long sought better means to protect and manage ecosystems, resource professionals have just begun to care about communities of people on their own terms. We have just begun to learn that many professional efforts have failed because the needs, desires, and visions of those communities have been ignored. We must understand that communities can undo what we have done, usually for good reason from their points of view, and that what the people of those communities know and need often determines what ecosystems are and can become. Exchange, trust, and vision are not tools for some abstract purpose and authority. They are relations among people that arise from respect for real knowledge and needs that then modify purposes and authorities for the common good.

LEARNING

Shared vision, trust, and exchange sustain relationships within which learning and innovation can occur. They provide solid support to step forward, to risk error, to act, to learn, and to adjust. Our professions have been living in a world of sharp lines. We have compensated for their brittleness with moralities that justified the exclusions and stagnation they bore. The suite of cases presented during this symposium bears the lesson of what can be learned and accomplished through simple crossings that start us toward mutual regard. The symbols of ecosystem and community can free us to help rework the map in a manner consistent with the vitality of people and places. This attempt to learn new ways to deal with natural resources conflict is not necessarily a search for harmony, which can be undesirable, but for the means to constitute relationships, social and ecological, in more viable and productive terms. Our

professions have not enjoyed such an opportunity since the turn of the century. The cases demonstrate what can be done and how far we have to go.

Conflict can be seen as opportunity. We know too well that it also can be destructive. Where is the line? I have concluded that conflict that builds trust and

mutual regard is constructive: that which destroys them is not. We do not want to diminish conflict that is creative. We can help to resolve damaging conflict by recognizing each person's need for a sense of dignity in his or her life. Perhaps that is the common ground for us all.

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