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RESTORING THE RIO GRANDE - WHAT WILL IT TAKE?

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SUSTAINABLE USE OF THE WEST'S WATER

**Natural Resources Law Center
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Restoring the Rio Grande- What Will It Take?

I. INTRODUCTION

The Rio Grande is a river under tremendous stress. It recently received national notoriety when American Rivers, a national advocacy organization, chose it to head their list of most endangered rivers in the United States. Rather than attempting to summarize the condition of the river and fully describe the many planning efforts that are underway, I will briefly note several pending ecosystem management ventures, then discuss a single restoration initiative and some of the institutional factors that may bear on its eventual success.

In this talk I contend that watershed management efforts in New Mexico do not show an immediate prospect of success and propose several factors that account for this. I want to clarify that "lack of success" has much more finality than I mean to convey. "Success" is a problematic term: an initiative might be successful measured by its own objectives, but not produce measurable improvements in the condition of the watershed, which is my working definition. I'm sure that all of these initiatives will be successful over time. There are more people committed to the river than I would have predicted was possible a few years ago and my experience in environmental protection convinces me that their good work will have benefits that are difficult to make out from this vantage point. (This is an article of faith that I do not wish to subject to rigorous analysis.) Finally, I am using the terms "watershed management", "ecosystem management", and "watershed restoration" with somewhat less precision than might be desired. This is because the question with which I'm concerned is whether the new paradigm of greater local participation in resource planning will happen in all parts of the West, and, if it does, whether the result will be that the management of the resource will be changed to further its

sustainability.

The purpose of this talk is to bring out some of the factors that have impeded ventures, to the end of asking how restoration can be nurtured. It is tempting to simply look at successful cases, but important that we don't overstate the lessons of these success stories and presume that they will occur everywhere.

There are three factors that have had a critical bearing on the experience thus far in New Mexico: the lack of a "crisis", the lack of a federal or state mandate to drive change, and the lack of a strong grassroots or citizen's movement with a stake in protecting the resource. The fourth element that certainly could be listed with the first three is the lack of money to support these efforts, but it is a matter worth discussing whether it is a cause or effect.

II. THE RIO GRANDE IN NEW MEXICO

The Rio Grande bears all the signs of a river that needs attention and concern. It is extensively used for irrigation and recreation, and supports a wide variety of plants, mammals, birds and fish. The Middle Rio Grande has lost between thirty-six to sixty-three percent of native fish species. There are nearly 300 species of birds present in the Middle Rio Grande bosque. (Id.) The State's Environment Department has determined that the river is polluted, failing to meet its designated uses throughout much of its length. (New Mexico Water Quality Control Commission, 1992) The reasons for this include nonpoint source pollution from agricultural operations, municipal point sources, hydromodification, storm runoff, and other familiar causes. It is not used as a direct source of a public drinking water supply within the state, although it recharges shallow drinking water wells and is consumed by those who swim in it. (One Pueblo ingests it as part of a religious ceremony.)

The Rio Grande is a significant part of New Mexico's culture. Fourteen pueblos are located on its banks and along its tributaries. Both the colonial Spanish settlements and subsequent

waves of settlement have occurred along it, from Albuquerque to Las Cruces, New Mexico. Land ownership along the riparian corridor is owned by federal, tribal, state and substate governments, and private interests.

One should also understand that New Mexico is a poor state, usually in the bottom five states in per capita income. Its population is growing rapidly, among the ten fastest growing states as a percentage of existing population. (U.S. Department of Commerce, 1994) With this increased population comes new users of the state's waters, from industrial users to those who fish and boat on its rivers and lakes.

III. SELECTED PLANNING INITIATIVES ON THE RIO GRANDE

I have followed environmental initiatives within New Mexico for about twenty years. In just the last five years, there has been a flowering of citizen initiatives directed at water issues and the Rio Grande, where there were almost none before. It is difficult to do justice to all of these, but the Ford Foundation sponsored a newsletter called "Dialogue", which has chronicled many. What follows is a description of just some:

- 1) New Mexico has been moving slowly towards regional planning for water supply. Regional planning was the outgrowth of an attempt to protect New Mexico groundwater from Texas users, by establishing the state's need for the water. While the effect that will be given to these plans by the entities that actually make decisions about water is unclear, there is a solid coalition of local supporters for these efforts, thanks in large part to foundation funding. Additionally, the state legislature has provided funding to regions to prepare these plans.

- 2) The United States Geological Survey has recently revealed that the City of Albuquerque's aquifer is much smaller than had been believed. It is not clear what the response will be to this information, but I expect public institutions to respond with both studies and new policies. Several ad hoc groups have explored needed scientific research and possible

management changes for the affected basin. Ecological concerns are not likely to be a high priority.

3) The Rio Grande/Rio Bravo Sustainable Development Initiative is attempting to involve people from the entire length of the River, in a basin that is 182,000 square miles in size, in planning for sustainable development of the region. It is especially noteworthy because of the collaboration that it has fostered with Mexican universities and citizens. Foundation funding and the support of the involved universities has assisted this effort.

4) New Mexico can lay claim to one of the most desertified regions in the United States, which contributes enormous amounts of silt to the Rio Grande through the Rio Puerco. The Rio Puerco watershed has been the focus of a Bureau of Land Management led planning effort. Senator Bingaman has introduced legislation to mandate this planning, with the eventual goal of providing support for a restoration effort in the Rio Puerco.

5) Possibly the most successful initiative is the least structured. Agency employees from federal, state, and regional organizations have held "Joint Initiatives" meetings, which have resulted in minimum flows being maintained in one stretch of the river. Other projects dealing with flow releases are being developed.

6) Tribal governments have also been involved in restoration activities, participating in some of these organizations, as well as conducting restoration on their own watersheds. The Zuni Pueblo's watershed project is a model for these activities.

7) In addition, there are several agencies and organizations involved in the collection and publication of data and water related research. These include the State Engineer's Office, the USGS, a new project called the New Mexico Inventory and Assessment, and the Water Resources Research Institute at New Mexico State University. The state also has a Riparian

Society, which has advocated support for riparian restoration projects.

IV. THE BOSQUE INITIATIVE

The Bosque Initiative had an auspicious birth. It was the creation of Senator Pete Domenici, who was concerned about the health of the cottonwood forest (the bosque), that is a defining feature of Albuquerque and the entire middle Rio Grande region. To begin the process, Domenici appointed nine citizens to form a committee, choosing as chair William deBuys, a Santa Fe writer, who has written a eloquent history of the Sangre de Cristo Mountain range and an insightful book about what he learned from a farmer in a small New Mexico village.

The committee learned, in deBuys words, that "the Middle Rio Grande has received more than 70 years of biological management but nearly all that management has been inadvertent and virtually all of it has had a negative effect on native ecosystems." (deBuys, 1993) There was no consensus by those with whom the committee met as to what a better management scheme would be, so the committee turned to Senator Domenici to get the support of federal agencies and Congressional funding for the creation of a biological management plan.

The biological management plan was done under the guidance of a University of New Mexico faculty member, with the assistance of employees from federal agencies and numerous others. The plan succinctly explained why the bosque is imperiled:

New Mexico's Rio Grande and its riparian forest, the "bosque", were for centuries central to the region's culture and development. Now, despite their importance in the past, the river and the bosque are being impacted by the effects of management and development accommodating needs of the region's growing human population. As a result, some of the last great cottonwood stands, trees that are the integral components of native biological communities, are now confined to the banks of a highly controlled and

physically altered river. River dynamics on which the native communities depend have been changed so much that these communities are no longer able to sustain themselves. Compounding the problem are introduced species such as salt cedar and Russian olive that are steadily replacing the aging native trees. Other factors, including a managed water table level in the floodplain, a reduced amount of wetlands, and a fragmented bosque, have also disrupted the original dynamics of the river and the riparian zone. Clearly the ecosystem is stressed. Biological Interagency Team (1993)

In addition to the work of the biological team, the committee also had meetings with members of the public and with tribal governments. It found that New Mexicans valued the Bosque for a variety of purposes, primary among them, "just knowing it is there." Citizens felt that "the river and its corridor should [not] be managed just for flood control, drainage and irrigation. While these activities are of utmost importance, they also want a healthy, diverse ecosystem, clean water, and recreational activities." (Rio Grande Bosque Conservation Committee, 1993)

The committee's work led to passage of a memorial in the state legislature urging the Governor to create a second task force, the Rio Grande Bosque Task Force. This task force looked at the management issues that had been identified as critical to realizing the recommendations of the biological team. It concluded that "the major problem confronting the management of a healthy bosque was the overlapping and poorly defined responsibilities of several federal, state, county and local agencies." The solution to this problem, the committee concluded, was a Rio Grande Bosque Management Council, which would have had representation from municipal, county, pueblo, regional, state and federal agencies. The only non-governmental representative would have been one private landowner. (Middle Rio Grande Bosque Task Force, 1994) Despite its title, the management council was

proposed as a coordinating entity, lacking substantive management powers over the bosque or other entities.

The task force had legislation introduced in accordance with this proposal, even providing a small appropriation to support the council's operations. To everyone's surprise, our new Governor vetoed the legislation. The reason given for the veto was the large number of agencies involved in the new council, but the council was intentionally large to reflect the many entities with an interest in the bosque's management.

The veto nullifies the mandate from the state legislature to continue this effort, but Senator Domenici's interest is presumably unabated. It is speculative whether this effort will result in restoration of the Rio Grande, but perhaps fair to say that physical changes in the bosque's management as a result of this initiative will be several more years in the future.

V. WHAT MIGHT HAVE AFFECTED NEW MEXICO'S RESTORATION EFFORTS?

A. The perception of a crisis

In teaching environmental law and policy, my students always reach a point when they ask what it will take for society to act in response to some threat. The problems seem obvious to the students, the solutions necessary, if unpleasant, and the consequences of waiting, disastrous. Society, on the other hand, seems to require the drama of syringes on the beach before it acts. Long term, but more major problems, such as global climate change, don't seem sufficient to propel action, or at least not as quick action as they would like.

The condition of the Rio Grande within New Mexico doesn't present the sort of clear crisis that propels change. (The situation changes drastically in the lower basin (Texas and Mexico), where human health issues have received widespread publicity and governmental attention.) Within New Mexico the changes are slow and incremental, some of the threats are nascent, a complicated legal system restricts access to decision-making, and some of the most important policies were established long ago.

The Bosque Initiative has been hindered because the deterioration of the bosque has been slow. It is also preeminently an ecological issue; people don't directly drink the water in the Rio Grande, nor are there hazardous dumps or other threats to human health.

Ultimately, what has kept both agencies and interest groups from coalescing around one of the many important questions that affect the Rio Grande's management is the lack of a setting or forum for these concerns. There has been no lack of conferences or workshops addressing these issues and they have been well attended. But, with a few exceptions, there have not been administrative or legislative fora in which the profile of these issues could be increased. For there to be a perception of a crisis, then, there would need to be a clearly posed moment of decision.

For a variety of reasons, these moments have been relatively few. One is, as noted above, that many of the most important decisions affecting water allocation have already been made. Thus, in contrast, to grazing on public lands, where land management decisions are periodically reviewed and subjected to public review through the National Environmental Policy Act, who gets what water was decided on the Rio Grande long ago. Instream flow levels in the river are an example of this. The river has been drastically altered by dams and irrigation works. The major uses of the river were established by the large irrigation districts on its length. The Rio Grande Compact of 1938 provides the overall framework for water deliveries. A citizen with a casual interest in supporting or increasing "instream flows" in the river would have no obvious forum for expressing that interest. Many of the most important decisions affecting instream flows were probably made before most of today's activists were born. Further, the arcane process that controls water transfers is just now being opened to public review. The state lacks a "little NEPA," having abandoned it at the behest of Steve Reynolds, our former State Engineer. Further, the State

Engineer's office generally eschews pronouncements of public policy, viewing itself as a "water administrator," not a "water manager." With this stance, it is not surprising that the office brings forth very few legislative initiatives that would offer interest groups a target for involvement in the agency's operations. Beyond this, however, the mystique that has surrounded the water code has discouraged otherwise intrepid environmentalists for reasons that are harder to discern. Our water buffaloes are usually able to graze in peace, although there have been a few commotions over the years.

It is interesting that, despite the failure of the environmental community to embrace the Bosque Initiative, within Albuquerque there is a heated debate over a proposal to fragment a stretch of the bosque to build another bridge over the Rio Grande. This proposal has the support of the Chamber of Commerce, the mayor, and the state's largest newspaper, but has been vigorously fought at every turn by the affected neighborhood and environmentalists from throughout the city. I would conclude that there is great support for the bosque, but that it is hard to mobilize around threats that have not been put before the public for decisionmaking. It also takes considerably less expertise to challenge a bridge before a city council than, for example, to intervene in an adjudicatory water rights proceeding.

B. A Federal or State Mandate

My impression is that a federal mandate has often been viewed as "the crisis" that led to cooperative planning. For example, the necessity of complying with the Endangered Species Act, rather than the underlying ecological crisis, is what seems to have provided the impetus for planning in some regions. In this sense, a federal mandate has helped give the necessary sharpness to an ongoing period of ecological decline and hence had the effect of triggering action.

Neither a federal nor state mandate has given that sort of push to planning efforts in New Mexico. Interestingly, the U.S. Fish and Wildlife Service recently listed one species which is

found in the Rio Grande, the Rio Grande Silvery Minnow. This action has been loudly denounced by the major players in water supply, but the recovery efforts are low key and do not seem to be the leading to a major planning effort.

The usual assortment of federal agencies has some involvement in the Rio Grande. None has volunteered to be the "gorilla in the closet" that must be satisfied by local planning activities.

The role of the state government is far from that of an initiator. New Mexico's environmental pollution programs are found mostly in a single agency, the New Mexico Environment Department. These programs mirror those of the U.S. Environmental Protection Agency (EPA), with the exception of a groundwater protection program, the environmental sanitation programs, and a few other exceptions. I would suspect that staff members would agree with the EPA (EPA, 1990) that protection of habitat and biodiversity should have a higher priority than many of the human health programs that the agency administers, but the funding of the agency is directed to providing minimum matches to the delegated federal programs. There are too few resources for pursuing unfunded and unmandated program interests.

The other relevant state agency is the Energy, Minerals, and Natural Resources Department. This department contains an unwieldy mixture of programs, but includes the Game and Fish Department, which has moved towards a greater interest in habitat protection in recent years. Staff scientists have participated in various initiatives directed towards watershed protection, but also lack the statutory mandate to do so.

Finally, one might expect the State Engineer's Office or the Interstate Stream Commission to mandate these efforts. New Mexico does have a statute providing for regional planning and small levels of funding have been provided by the legislature for this purpose. The focus of these efforts has been water supply and it is unlikely that ecological restoration will emerge from these plans.

C. The relative weakness of citizen activists

For a short time, I participated in meetings of attorneys who were representing environmental organizations in the Bay-Delta proceedings. They filled a conference room. In New Mexico the citizen environmental movement is comparatively minute, as one would expect in a state with such a small population. The emphasis by New Mexico groups was historically on wilderness protection, then air pollution, the now-traditional environmental pollution programs, and the manifestations of the nuclear fuel cycle. Subdivisions, solid waste and mining, and threats to specific locations also have been addressed. Water quality has been a focus of activities through participation in standard setting, groundwater regulations and hearings, and monitoring of the state's Environment Department. Participation in decisions affecting water allocation and water supply has been extremely limited, although there have been some colorful exceptions.

Two recently formed organizations from Northern New Mexico, Amigos Bravos, and Rio Grande Restoration, have begun to confront broader questions of the health of the Rio Grande. The National Audubon Society has a regional representative in Santa Fe who has been a strong participant in these discussions, and several other organizations have played a role in planning processes. All of these organizations are short-staffed in relationship to the demands for their involvement.

While most planning efforts go to great efforts to bring an environmental body to the table for the sake of assuring some credibility to the planning effort, this was not the case in the Bosque Initiative. This reticence may have been due to the recalcitrance expected from the landowners, the Middle Rio Grande Conservancy District, and others who would be uncomfortable with the assertive demands of environmental activists, and to a belief that the support of the environmental community was assured without any special measures. Whether because of the deliberate distance originally imposed by the Task Force, or for other reasons, the initiative did not win as much support from the

environmental community as one might have expected from its substance.

I would contend that the thinness of the state's environmental sector presents formidable obstacles to realizing the objectives of a planning venture. One reason is the pressure exerted by advocacy groups to reach a favorable conclusion; the second reason is our customary reliance on an environmental group to be the advocate for resource protection.

Private landowners and some government agencies can be expected to be powerful defenders of the status quo in the bosque. Most citizens in the region strongly favor protection of the bosque and value it very highly. Unorganized, these citizens don't attend series of hearings, lobby, or testify, unlike environmental groups. From the experience thus far, I suspect that some powerful group with an interest in environmental restoration will be necessary to bring about institutional change and actual changes in management, in the absence of a federal or state mandate.

The Bosque Initiative will present a good case study in this regard, as will the other initiatives that I mentioned above. In many of these the activities are conducted primarily by staff members of government agencies, academics, and a few members of the general public. The advantage to these efforts are that they require little hard money, because the organizations which send representatives are effectively subsidizing their costs. The open question is whether they will be sustained and achieve concrete results without the strong participation of advocacy groups.

The absence of well organized environmental representation in a region presents a dilemma for those who advocate participatory planning as a means of addressing resource management and disputes. In a state with a relatively weak environmental sector, where only a few groups have paid staff, the disparity between those who are the paid representatives of the large institutions (for example, the attorneys and staff who represent organizations such as the Middle Rio Grande Conservancy

District and the City of Albuquerque's Public Works Department) and the nonprofit sector results in weak to nonexistent advocacy of environmental interests. The model depends on equal staying power for all interests, if a balance is to be struck between exploitation and preservation of resources. If the environmental sector cannot play this role, then the new paradigm needs to be rethought.

D. Lack of Funding

It is not within human nature as I know it for people to believe that their enterprise is adequately funded. But, those who believe that the presence of just one paid staff person, or enough money to pay citizens' expenses at a meeting, would make all the difference to the success of their endeavor are not wrong. Without venturing into the metaphysical, it is not clear whether lack of funding for the many worthwhile Rio Grande efforts is the reason that they have failed to thrive, or emblematic of the other limitations under which they labor.

The Bosque Initiative has the support of a powerful senator. The money that has supported the initiative has led to solidly based scientific research about the ecological problems of the Bosque. While unpaid efforts by many citizens contributed to the products of the various committees, the infrastructure provided by some direct funding, federal agency support, and university research has made the difference in the project proceeding as it has to date.

Other efforts have certainly been hindered by a lack of funds. New Mexico has only a few foundations with headquarters here, in contrast to the Bay Area, where foundation support was essential to a sophisticated, long-term environmental presence in the Bay-Delta proceedings. Membership dues are not sufficient to support any environmental advocacy group in the state of which I'm aware. Neither EPA or the Department of Interior supports restoration efforts in New Mexico with any large-scale funding, to my knowledge. (In contrast, the Clean Water Act established a program for funding estuary projects and substantial federal

funds have flowed into the Pacific Northwest and Florida Everglades for restoration.)

VI. LESSONS LEARNED FROM NEW MEXICO

I believe that watershed management and restoration will prove to have been an important policy innovation in improving the management of western rivers. But, I do not believe that it will happen across the west simply because it is a good idea. Much of the thinking that has led to the devolution and dismantling of federal programs has been the perception of differences among states and the belief that a single solution will not work everywhere that federal law reaches. In this process of devolution, it cannot be assumed that all states will spring forth with initiatives that successfully replace command and control regulation.

If we are to have continued progress in environmental programs in all parts of the west, the nation will have to foster local initiatives. In New Mexico, the absence of a strong, well-funded environmental movement that is focused on watershed issues threatens the success of initiatives that have been launched by academics, bureaucrats, and consultants. Further, local environmentalists are usually assumed to provide the needed balance to the pluralistic planning model, providing the necessary counterweight to those who make their living from more consumptive uses of the land and water. Those who endorse locally based planning models must confront the issues raised by locations that lack this presence.

When a strong environmental presence is lacking, one way to compensate is with more vigorous environmental advocacy by agency bureaucrats. This is in contrast to the typical regulatory negotiation situation, where agencies can allow diverse factions to reach an agreement that then becomes the basis for the government's position.

Sustaining restoration efforts in regions where organized environmental support is lacking is a related problem. The actions of the Ford Foundation in funding a newsletter and other

mechanisms to facilitate citizen participation in New Mexico's regional water planning surely helped stimulate participation by entities that would not otherwise have been present. The environmental participation has been fairly minimal, but other organizations and individuals have committed to seeing regional planning become a reality, despite the occasionally lukewarm support of the state agencies. Recognizing the need to create a grassroots lobby and spending resources to do so may be necessary to bring an initiative to fruition.

The lack of a federal or state mandate should be easiest to remedy. The Bosque Initiative has an unusual mandate, but one that most agencies would not readily ignore, the personal interest of a powerful Senator. Senator Bingaman has expressed personal interest in the Rio Puerco and has attempted to provide legislative support for management efforts that are underway there. It is an open question whether the Federal Endangered Species Act will continue to provide a mandate for planning and restoration. I suspect that many of those who criticize the act will not want to lose the impetus that it has given to local solutions. This item can be remedied if the Congress is persuaded that these planning initiatives are capable of providing good answers to their constituents' concerns, and, that a federal mandate (fully funded, of course), is necessary for them to occur throughout the country. State legislatures might also mandate them.

Funding is necessary, as well. Those who live in more urban and well-off regions of the West need to use caution in extrapolating to the remainder of the West, where resources are harder to come by. If Congress does support these efforts, it will be important to ensure adequate funding across the west.

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