

# RIO GRANDE BOSQUE CONSERVATION COMMITTEE

Part of the Conservation Initiative of U.S. Senator Pete V. Domenici

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June 30, 1993

The Honorable Pete V. Domenici  
427 Dirksen Building  
Washington, D.C. 20510-3101

Dear Senator Domenici:

It is my privilege to transmit to you the final report of the Rio Grande Bosque Conservation Committee, which you appointed and charged in September, 1991.

At a meeting in Albuquerque on May 26, 1993, the Committee completed its work on the document, incorporating numerous suggestions and ideas gained from public comment on an earlier draft. Having finished our labors, the members of the Committee then present, who included Hector Gonzales, Dorothy King, Hanna Lattman, J.C. Sanchez and myself, voted unanimously to approve the entirety of the report, including all of its recommendations. Other members, who for reasons of illness or distance had been unable to attend the meeting and who included Rowena Baca, Paul Risser, and Lynne Scott, subsequently voted by telephone to approve and give full endorsement to the report.

Thus we present to you the result of nearly two years' hard work, which also represents the good efforts of dozens of institutions, public and private, and hundreds of private citizens who participated in the Committee's public involvement program.

We are grateful to you for the confidence you placed in us to undertake this task, for your support and guidance throughout the course of our efforts, and especially for your commitment to restore and protect the vigor of the Rio Grande Bosque and preserve the many benefits it provides to the people of New Mexico.

We hope that we have been able to contribute positively toward that end.

Sincerely,



William deBuys  
Chairman

WdB:dlp  
Enclosure

William deBuys, Chairman

Rowena Baca

Hector Gonzales  
Dorothy King  
Hanna Lattman

Paul Risser  
J.C. Sanchez  
Lynne Scott

**THE RIO GRANDE BOSQUE  
CONSERVATION COMMITTEE**

**RECOMMENDATIONS FOR  
CONSERVATION OF THE MIDDLE RIO GRANDE  
BOSQUE**

June, 1993

**EXECUTIVE SUMMARY**

After consultations with diverse interests and a lengthy series of public meetings, the Rio Grande Bosque Conservation Committee concludes that:

- The Middle Rio Grande Bosque is undergoing rapid ecological change which endangers the future existence of native biological communities, especially riparian gallery forests of cottonwood and willow.
- The value of the Bosque is greater than the sum of its uses and benefits. People value it for its own sake.
- People demand stronger management of the Bosque, including enforcement of existing ordinances.
- People don't want greater governmental complexity.
- People recognize the importance of flood control, irrigation, and drainage but agree that the river and the bosque should not be managed for these ends alone. The public wants a balance of compatible goals and activities, including maintenance of a healthy, diverse ecosystem and provision of clean water and recreational opportunities.

The Committee developed ten recommendations based on the comment and information it received:

1. A biological management plan for the Middle Rio Grande should be developed as a first step toward restoring the Bosque's health.
2. The institutional structure that currently manages the Middle Rio Grande should be redesigned, expanding management's mission to include, in addition to irrigation, flood control and drainage, ecosystem management, recreation management and the balancing of compatible uses of the Bosque. This task of redesign should be undertaken by a task force authorized by the New Mexico State Legislature.
3. Local governments should become more involved in the protection of Bosque resources within their jurisdictions, especially through improved enforcement of existing ordinances and regulations.
4. Constructed wetlands should be considered for treatment of effluent. Such wetlands will also increase habitat for Bosque wildlife.
5. Efforts to control erosion in upland areas, especially the watershed of the Rio Puerco, need to be strengthened.

6. Development of Best Management Practices for a wide range of activities can help control nonpoint source pollution.

7. Use of drains for conveying irrigation water causes valuable bosque, agricultural, and residential lands to become water logged. The MRGCD should find alternatives to this practice.

8. Agencies involved in Bosque fire control and prevention need to strengthen coordination among themselves.

9. A broad-based effort to improve public education on bosque-related topics should be launched.

10. Structures should be developed to direct private charitable giving toward Bosque protection efforts.

**PREAMBLE**

This report culminates nearly two years of work by Senator Pete Domenici's Rio Grande Bosque Conservation Committee. This work included public meetings, meetings with the relevant government agencies and pueblo governors, preparation of proposals, fact sheets, and communiques, on-site tours, many hours of Committee meetings, and much more. Having invested its best efforts, the Committee earnestly hopes that the recommendations contained in this report be implemented. The major proposals herein are for the most part interdependent. The ultimate value of each is dependent on the implementation of the others.

**PURPOSE OF THE COMMITTEE**

The Rio Grande and its Bosque are the lifeblood of central New Mexico. New Mexicans recognize that the river and the Bosque provide a foundation for agriculture as well as for many other vital economic activities. They also value the Bosque as a place to walk, bicycle, ride horses, or just sit and enjoy. It enhances the quality of our lives and our communities. Ask yourself:

- What would central New Mexico be like without the river and its riparian areas?
- Would you have chosen to live here?
- Would the communities still exist?
- Would the area's history or the diversity of its people be as rich?
- Would anyone have chosen to locate farms or industries here?
- Would our economic future be as bright?

And then ask:

What will the river and its Bosque be like in the year 2000. In 2025? In 2050? Will the Bosque, as we know it now, still exist?

Will the river corridor still enhance the quality of our lives and communities, and will it still attract visitors, new residents, and businesses to our region?

What do we need to do to assure a healthy future for the river and its bosque so that they will

continue to anchor our region environmentally, culturally, and economically, as they do today?

These are some of the questions that led Senator Pete Domenici to appoint the Rio Grande Bosque Conservation Committee in September, 1991. He asked the Committee's nine citizen members to examine the problems affecting the Bosque, to solicit broad public involvement, and to make recommendations for the long term protection of the Bosque and continuation of the many benefits it provides.

#### **PRINCIPLE CONCERNS EXPRESSED BY THE PUBLIC:**

The Rio Grande Bosque Committee functioned under the premise that the public's concerns and desires regarding the Bosque were of primary importance. Following are some of the major points of agreement expressed at public meetings:

1. The value of the Bosque is greater than the sum of its uses and benefits. People everywhere value it for its own sake. They are glad "just knowing it is there." This widespread sense of connection to the Bosque is especially intense among the six Middle Rio Grande Pueblos, who maintain strong spiritual ties to the river and its corridor.

2. People badly want stricter enforcement of ordinances prohibiting trash dumping and vandalism in the Bosque.

3. People don't want greater government complexity. They want local governments and existing agencies to work together to protect and manage the Bosque.

4. People don't think the river and its corridor should be managed just for flood control, drainage and irrigation. While those activities are of utmost importance, they also want a healthy, diverse ecosystem, clean water, and recreational opportunities. They want to see a balance of compatible goals and activities. They agree, however, that vehicular access in the Bosque should be determined in accordance with local use plans.

#### **BASIS FOR THE COMMITTEE'S RECOMMENDATIONS:**

The Committee gathered data and public comment and arrived at a number of important conclusions:

1. The Rio Grande Bosque is nationally, regionally, and locally significant. Ninety-five percent of native riparian habitat in the Southwest has been lost in historic times. Much of the best cottonwood-willow bosque that remains is to be found along the Middle Rio Grande.

2. People value the Bosque highly. People from all walks of life and representing all kinds of interests—farmers, hunters, birders, hikers, etc.—were virtually unanimous in saying the Bosque is important to them. Further, the Bosque provides myriad benefits and opportunities. It is important for recreation, religious ceremonies, irrigation, education, wood gathering,

hunting, and enjoyment of solitude—its uses are as numerous and diverse as the people of central New Mexico.

3. The River and the Bosque are in decline. Water quality continues to deteriorate; native tree species continue to lose ground to introduced species; trash dumping, vandalism, and other problems continue to impair the health of the bosque and the ability of people to enjoy it.

4. The river and the bosque are inseparable. Problems affecting one also affect the other.

5. Private ownership of land and water rights must be respected.

6. While dealing with city and county governments, the Committee also noted the sovereignty of the Pueblos and their authority over the Bosque within their jurisdiction. The Committee acknowledges that the Indian communities have been an integral part of attempting to preserve the Bosque, and appreciates their continued cooperation.

#### **SPECIAL NOTE WITH REGARD TO WATER QUALITY**

Water quality is an issue of vital importance. It affects human health, agricultural productivity, and the ecological health of the entire river system.

In public meetings to review draft versions of these recommendations, the Committee was repeatedly asked why it made no recommendation relating to the establishment of new and stringent water quality standards by Isleta and other Pueblos.

Processes already underway involving litigation and negotiation between Isleta Pueblo, the City of Albuquerque, and various state and federal agencies should resolve many key water quality issues and establish important precedents for dealing with others. The Committee hopes and urges that these processes be speedily completed and result in fair treatment for all parties and in overall improvement of the biological health of the Rio Grande and its Bosque.

#### **FINDINGS AND RECOMMENDATIONS**

Three of the Committee's recommendations involve detailed planning efforts, one of which is already underway. These plans will complement each other. (A diagram showing how the plans fit together is appended to this report.) The Committee's other recommendations involve actions that can be taken in the immediate or near future, without complex authorization or a great deal of additional planning.

We begin our recommendations with those involving the three complementary plans.

##### **I. BIOLOGICAL MANAGEMENT**

**FINDING:** The Bosque, as we know it, is in a state of rapid biological change. Some native species, cottonwood in particular, are failing to regenerate. Introduced species like russian olive and tamarisk increasingly dominate the riparian corridor.

Because New Mexicans greatly value native cottonwood and willow ecosystems, the impending loss of these communities means that, from a sociological if not also a biological point of view, the Bosque is in a state of crisis. Although a great deal of information is available about the ecology of the Bosque, this information is not well assembled or integrated into management.

**RECOMMENDATION:** A Task Force, led by a Biology professor from the University of New Mexico, consisting of professional scientists from the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and the Bureau of Reclamation, and drawing on the advice and skills of the widest possible range of experts, should develop a Biological Management Plan for the Middle Rio Grande. The Plan should include, but not be limited to:

Identification of a desired mosaic of biological communities;

Identification of methods by which the desired biological diversity can be maintained and/or established, including plans of action to assure regeneration of key species.

**ACTION:** Funding for the task force has been obtained and the planning process is currently underway. The findings of the task force will be available by the Fall of 1993 for consideration by agencies responsible for managing the river and the Bosque.

## II. INSTITUTIONAL MANAGEMENT STRUCTURE

**FINDING:** The Rio Grande Bosque is a valuable resource with a variety of uses and users. As such, its management requires a structure that:

- involves the public in consideration of key issues, and provides a forum for continued public input;
- produces a comprehensive and integrated plan for management policies and practices;
- recognizes the multiple uses and users;
- incorporates an adaptive management strategy

that is capable of change as new information becomes available, and that is capable of evaluating and monitoring its own performance.

**RECOMMENDATION:** The current matrix of governance and administrative structure does not adequately satisfy these criteria, and thus changes will be useful to better coordinate management resources and responsibilities. That changes are required is not surprising, since the initial management structures were designed before the wide range of uses and users was recognized, and before much of the current knowledge about the Bosque was available. Therefore, such change would be a natural consequence of increasing demand and need for sophistication of managing natural resources and public involvement in the decision-making processes.

**Possible Models for Management:** The Committee has identified three possible models to better meet current needs.

**First,** the responsibilities and jurisdictions of the existing agencies could be adjusted to meet the necessary requirements for managing the Bosque.

**Second,** a new comprehensive agency could be created, designed specifically to meet the requirements of the Bosque as they are understood today.

**Third,** the existing agencies could be retained, but additional coordination mechanisms could be formed to meet the integrated needs of management policies and practices relating to the Bosque.

**Role of the Management Structure:** Regardless of the actual governance and administration model implemented, this structure will play several roles.

**First,** it will be necessary to describe a common vision for the future of the Bosque. This vision should recognize that the Bosque is an integrated system of biological, physical, social and cultural components. Because of these multiple components, the administration must recognize the many values of the Bosque, that there are many current and future users, and that not all reaches of the Bosque should be managed in the same way nor for the same priority uses.

**Second,** because the Bosque is a public resource, the governing body must include representatives from the constituencies who benefit from and use the Bosque. Although this structure must have the responsibility for promulgating management policies and practices, the public should also be involved in offering advice on key topics, having opportunities to respond to proposed management alternatives, and reviewing the actions of the governing body.

**Third,** regardless of the selected management model, there must be clear lines of jurisdictional responsibility. This clarity is required to ensure that the responsibilities of each entity are known by all those charged with managing the Bosque, to ensure that issues are not neglected by simple omission, and to provide the public with an opportunity to evaluate the performance of those responsible for the management policies and practices of the Bosque.

**Fourth,** the management structure must recognize existing rights and privileges, such as land and water rights held by land owners, and those retained by the Pueblos.

**Fifth,** the management structure must include sufficient powers and resources to implement and enforce the necessary management policies and practices within the Bosque itself, to encourage compatible management of the areas surrounding the Bosque where these areas have significant influences on the Bosque, and to arbitrate possible conflicts among jurisdictions.

**Sixth,** increased funding will be required to

manage the Bosque and to improve its values for the broad community of users. In designing the sources of these funds, it must be recognized that current MRGCD rate-payers receive specific values from the Bosque. However, in addition to its local significance, the Bosque is also a regional, state and national resource, and current rate-payers should not be expected to bear the costs alone.

Seventh, the structure must accommodate the principles of adaptive management. The Bosque is a living system, hence its condition must be constantly evaluated. As new information becomes available, management practices may have to be changed. Thus, the administrative structure must explicitly include mechanisms for gathering new information and incorporating this new knowledge into the management policies and practices.

**ACTION:** The Committee believes that each of the three models for management structure set out earlier is reasonable and could serve the functions enumerated above. The Committee further believes that the existing agencies and the public should have ample opportunity to study and to comment on each alternative. Designing the structure necessary for managing the Bosque in a more integrated manner will require a deliberate, thoughtful approach. Thus, this work of design should be undertaken by a legislatively-mandated, non-partisan task force, whose membership must include representatives from the agencies currently managing the Bosque, all levels of government from local to federal, and the many and varied constituencies of the Bosque. In formulating its final recommendation, the task force should consider the recommended roles for the governing body as described by this Committee and the information provided during the public hearings. The task force should also consider and suggest ways in which the federal agencies can operate more effectively toward the goal of preserving the Bosque.

### III. LOCAL GOVERNMENT

**FINDING:** On a range of issues from trash dumping and groundwater pollution to recreation and law enforcement, local governments need to become more involved in the protection of the Bosque. Toward that end they need assistance in assessing and addressing Bosque issues under their jurisdiction.

**RECOMMENDATION:** Provide funds to a Coordinating Agency (the agency could be state or federal; the National Park Service, for example, has authorization for programs of this sort) so that the Agency might make grants to counties, municipalities, and pueblos to hire professional planners for up to two years to develop Bosque Plans. Participation by local governments in this program of grants would be entirely voluntary. The program would begin with a limited

number of pilot grants and would be subject to revision depending on the success of initial efforts.

**The Coordinating Agency would be responsible for:**

- 1) hiring or assigning its own "coordinating planner" to direct this program,
- 2) assisting local governments with selection of their planners,
- 3) developing standards and goals, and assuring compatibility of the plans with each other, and with the Bosque Biological Management Plan to the extent feasible,
- 4) providing support, facilitating inter-county communication, and assuring quality control throughout the planning process.

**Topics (at a minimum) which the local plans should address:**

- 1) A plan for assuring public safety in the Bosque and enforcing applicable ordinances, including those relating to dumping, firearms, trespass, and road closures, vandalism, etc.
- 2) A strategy for solid waste disposal to alleviate dumping.
- 3) A land use plan for the Bosque and immediately adjacent property, addressing building in flood zones, standards for septic tank and well permits, groundwater protection, runoff, appropriate zoning, building standards, etc.
- 4) Recommendations for controlling erosion from development activities.
- 5) A plan for Bosque-related activities, including recreation. This plan should address local access and use issues.
- 6) Procedures for appropriate consultation with all agencies whose activities impact the Bosque.

Upon completion, a plan which met the original standards set forth by the Coordinating Agency could be submitted to appropriate public boards and commissions for approval. Projects that advance approved plans would be eligible for federal matching grants through, possibly, the 'state-side' grants program of the Land and Water Conservation Fund.

**ACTION:** Seek funding and commitment from the National Park Service's Rivers, Trails and Conservation Assistance Program to undertake the needed program.

**OTHER RECOMMENDATIONS:**

### IV. EFFLUENT MANAGEMENT

**FINDING:** Constructed wetlands have been found to benefit areas similar to the Bosque in two important ways: 1) effluent and other kinds of contaminated waters can be cleaned before entering

rivers; and 2) additional habitat for birds and other wildlife can be created.

**RECOMMENDATION:** The Committee recommends that funding be identified and secured for research to determine the impacts, both positive and negative, of constructed wetlands on the Bosque ecosystem. In addition, the Committee recommends that pilot projects utilizing constructed wetlands be considered for use where water treatment is needed, and that such constructed wetlands be carefully located to avoid damage to existing Bosque. The Committee understands that these efforts should be carried out in close coordination with the Biological Management Task Force, and other agencies responsible for water quality and environmental protection in the Bosque.

#### V. WATERSHED IMPROVEMENT

**FINDING:** Siltation resulting from erosion in the uplands is a problem in some reaches of the river. For instance, the Rio Puerco, which since 1974 has contributed 66% of the silt entering Elephant Butte Reservoir, has been declared an impaired watershed by the New Mexico Environment Department because of nonpoint source pollution in the form of high sediment levels. In view of the large sums spent annually to remove sediment from the channel of the Rio Grande, it is possible that increased government expenditures to control upland erosion would result in a net savings to the taxpayer in addition to providing benefits locally in upland areas.

**RECOMMENDATION:** The Rio Puerco Watershed Project, a cooperative effort led by the Bureau of Land Management and involving 13 public agencies and local communities, should receive steady, dependable funding. Additionally, all agencies with land management responsibilities should evaluate the efficacy of their erosion control programs and structures.

#### VI. NON-POINT SOURCE POLLUTION

**FINDING:** Widespread concern exists over contamination of the river and the bosque from various non-point sources, such as storm run-off from streets, lawns, and fields.

**RECOMMENDATION:** The Committee recommends that public agencies dealing with activities that can lead to nonpoint source pollution should consult with private citizens and the scientific community to develop Best Management Practices (BMPs) for those activities. Such BMPs would address irrigation methods, burning and clearing of ditches, use of pesticides and fertilizers, including residential, municipal, and other non-agricultural use, and other matters. The Committee further recommends that these Best Management Practices be communicated to the public and adopted.

#### VII. WATER LOGGING OF LANDS

**FINDING:** Concerns exist, particularly among Pueblos, about the use of drains for conveyance of water. This practice has caused valuable bosque, agricultural, and residential lands to become water logged. It also diminishes the wildlife habitat value of drain corridors and contributes to water pollution when septic drain fields become saturated with water during irrigation season.

**RECOMMENDATION:** The Committee recommends that the Middle Rio Grande Conservancy District re-evaluate its use of drains as water conveyances and urges the MRGCD to find alternatives to this practice wherever possible.

#### VIII. FIRE CONTROL

**FINDING:** Fire protection and prevention is extremely important within the bosque. The New Mexico State Division of Forestry and various municipal fire departments have primary fire-suppression responsibilities on State and private lands within the Bosque.

**RECOMMENDATION:** The Committee recommends that all available fire-fighting organizations including the U.S. Forest Service, BLM, and the Pueblo fire fighters explore strengthening their existing cooperative agreements with agencies bearing primary responsibility for Bosque fire protection and prevention.

#### IX. EDUCATION

**FINDING:** Public understanding of the Bosque and its dynamics must be enhanced to help motivate activities to protect the Bosque and balance its uses.

**RECOMMENDATION:** The New Mexico Museum of Natural History should take the lead in forming a coalition of appropriate educational and natural resource entities and institutions for the purpose of developing a Water Resources/Bosque Education Program. This program could include public service announcements, school programs, exhibits, adult education, TV programs and announcements, etc. Topics could cover information about the dynamics of the Bosque and how it works, its history, and the value of the Bosque on a local, regional, and national level.

**ACTION:** The New Mexico Museum of Natural History has initiated a process of consultation with educators from a variety of institutions for the purpose of designing a broad-based program for bosque education.

#### X. PRIVATE FINANCIAL SUPPORT

**FINDING:** Willingness exists in the private sector to contribute toward protection of the Bosque.

**RECOMMENDATION:** Explore alternatives for directing increased private sector charitable contributions to bosque-related needs and projects.

#### **ACKNOWLEDGEMENTS**

The Rio Grande Bosque Conservation Committee would like to thank the following people and organizations for their generous donation of time, facilities, and effort: Senator Pete V. Domenici; Middle Rio Grande Conservancy District, Pueblos of Cochiti, Isleta, Sandia, Santa Ana, San Felipe, and Santo Domingo; All Indian Pueblo Council; U.S. Fish and Wildlife Service; U.S. Bureau of Reclamation; U.S. Army Corps of Engineers; National Park Service; National Fish and Wildlife Foundation; The Conservation Fund; State Engineer's Office; Western Network; City of Albuquerque, Open Space Division; Bernalillo, Sandoval, Socorro, and Valencia Counties; Alameda Community Center; University of New Mexico; Sevilleta National Wildlife Refuge; Rio Grande Nature Center; New Mexico Museum of Natural History; 542nd Transportation Squadron, Kirtland AFB.

The Committee would like to add a special thanks to everyone who attended its public meetings and who shared their views on Bosque issues.

#### **HOW THE COMMITTEE WORKED:**

September, 1991: Senator Domenici appointed a nine-member citizen task force—the Rio Grande Bosque Conservation Committee. In its first months of operation, the Committee conducted various field trips and meetings to familiarize its members with the Bosque and related issues.

January-February, 1992: Focusing first on the biology of the Bosque ecosystem, the Committee hosted a round-table discussion with federal, state, and local agencies involved in the management of the Rio Grande. In cooperation with Western Network, a Santa Fe-based non-profit organization specializing in facilitation and mediation, the Committee also began planning a public involvement program.

March, 1992: Following discussions with the State Engineer, the Army Corps of Engineers, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, the Middle Rio Grande Conservancy District (MRGCD), biologists at the University of New Mexico, and the City of Albuquerque, the Committee formulated a proposal for an "Inter-Agency Biological Management Plan."

April, 1992: Senator Domenici, the Committee, and the members of the public met at the Rio Grande Nature Center to witness the formal signing of a Letter of Intent between the U.S. Fish and Wildlife Service,

U.S. Army Corps of Engineers, and U.S. Bureau of Reclamation. The letter expressed the agencies' agreement to cooperate in preparing a Biological Management Plan for the Middle Rio Grande. Congress provided the necessary funding at Senator Domenici's request.

May - July, 1992: The Committee prepared materials for its Public Involvement Program, including a questionnaire, fact sheet, and newsletter. The Committee also met regularly to discuss other topics including conservation education, the Biological Management Plan, and other issues.

August, 1992: Senator Domenici and the members of the Bosque Committee held public meetings in Socorro, Los Lunas, and Alameda, facilitated by Western Network. Approximately 240 citizens attended, offering their views on scores of issues relating to use and management of the Bosque and the river. At these meetings, the Committee distributed and collected a questionnaire which provided valuable additional information.

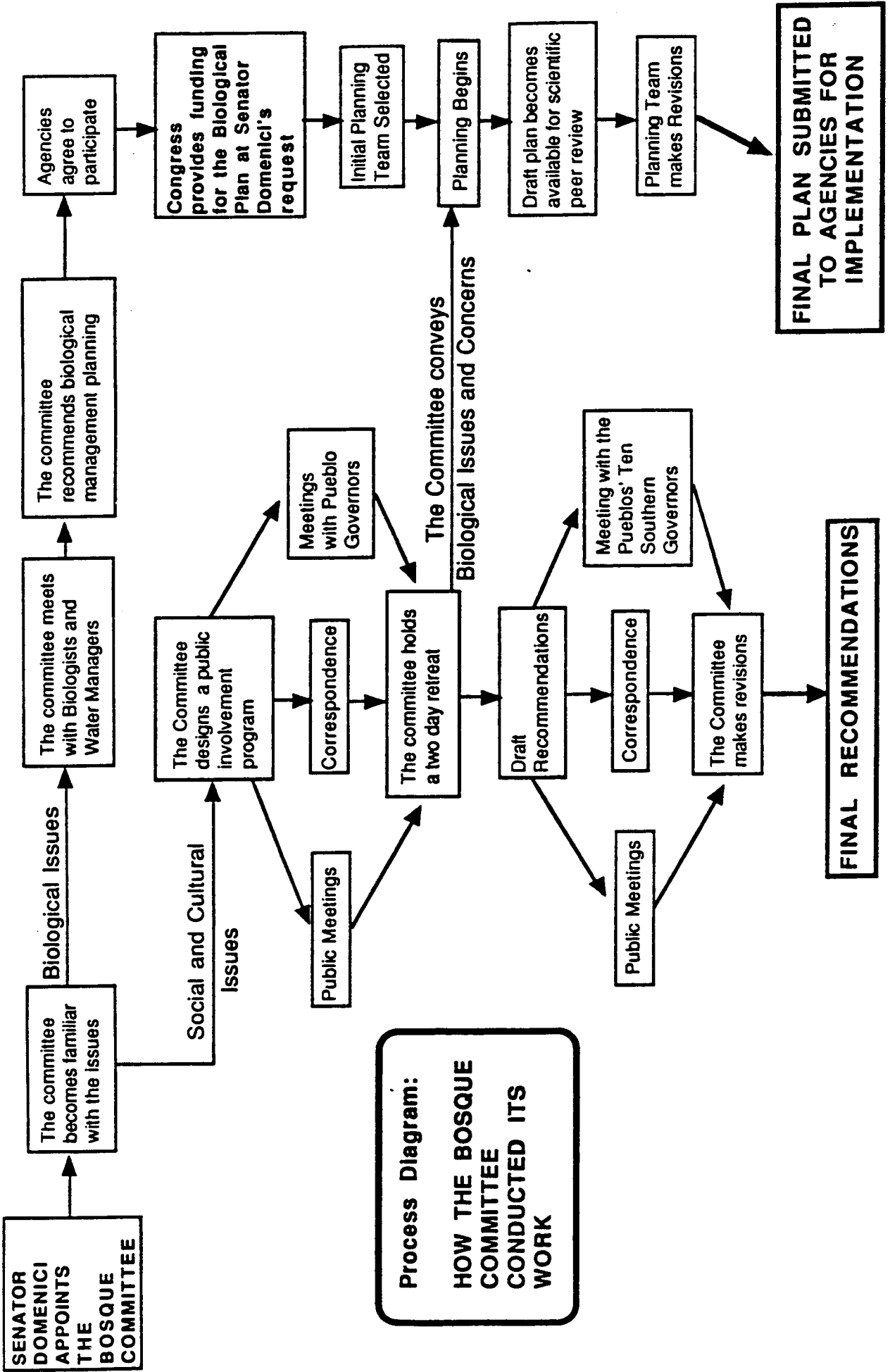
September - October, 1992: Members of the Committee, a representative from Senator Domenici's Office, and a Western Network facilitator discussed bosque conservation with leaders of each of the six Pueblos along the Middle Rio Grande. The Committee mailed summaries of the comments received at the public meetings to all the people who attended them, as well as to the Pueblos. With help from the U.S. Fish and Wildlife Service, the Committee reviewed issues relating to the possible listing of the Southwestern Willow Flycatcher and the Rio Grande Silvery Minnow as endangered species.

October 31 - November 1, 1992: The Committee conducted a retreat at Sevilleta National Wildlife Refuge to study and discuss the information gathered at the public meetings and to formulate draft recommendations for conservation of the Middle Rio Grande Bosque.

February, 1993: Senator Domenici and the Committee held public meetings in Bernalillo, Isleta Pueblo, and Socorro for public review and comment on the draft recommendations.

March, 1993: the Committee Chair presented the draft recommendations to the Ten Southern Pueblos' Governors Council.

May and June, 1993: the Committee revised its draft recommendations in light of public input and submitted its revised report to Senator Domenici.





**Product Diagram:**

**HOW THE BOSQUE COMMITTEE'S MAJOR RECOMMENDATIONS FIT TOGETHER**

