

12.3. DEVELOPMENT OF MISSION STATEMENT, GOALS, ALTERNATIVES, VISION STATEMENTS AND SCENARIOS

This section discusses the development of the mission statement, goals and alternatives during both Phase I and Phase II. It then discusses the development of the vision statements and scenarios. Further information can be found in the appendices.

12.3.1. Phase I

As mentioned in the Section 2, the Río Puerco and Río Jemez Steering Committee developed the following interim Mission Statement in July 2001 based upon input from the two watersheds:

The Río Puerco y Río Jemez Steering Committee promotes the enhancement of watershed restoration efforts that will benefit communities and its residents by increasing water production and improving water quality.

The RP and RJ Steering Committees also developed, based upon public input, a consolidated list of Interim Goals. This list was a consolidation and reflection of comments and concerns from both sub-regions:

1. Manage the watersheds for increased water production and improved water quality
2. Insure that traditional values and use of water are preserved
3. Educate all citizens about the need to use water wisely
4. Provide for reaching public participation in the water planning process
5. Promote the conservation of water and incorporate these concepts in the local schools' curriculum

During the summer and fall of 2002 the RP and RJ Steering Committees also developed a list of preliminary water management alternatives (actions) which reflected comments and concerns from both sub-regions:

1. Manage and Restore our Watersheds
 - reduce wildfire hazard
 - minimize negative vegetation effects on water quality using Best Management Practices (BMPs)
 - improve stream channel health
 - create local employment and economic benefits
2. Reduce Water Demand
 - every customer (user) has his or her own water budget
 - incentive pricing can generate significant water savings
 - allow for greater water availability for other users
3. Increase Water Storage Capacity in Rural Areas

- o additional storage protects from drought
- o adds flexibility in water management
- o a regional approach would be beneficial
- 4. Reduce Water Loss in Acequias
 - o lining and repairing existing acequias can reduce or eliminate contaminant into groundwater supply
 - o some of the water savings would otherwise have recharged groundwater
- 5. Protect Water Rights
 - o rural communities and their way of life cannot be sacrificed to provide water for growing municipalities
 - o acequia and tribal issues for water use and management should be recognized at all times
- 6. Use Surface and Groundwater in Combination
 - o common sense alternative
 - o use surface water in wet years, groundwater in dry years
- 7. Manage Growth and Land Use Together
 - o helps maintain a sustainable community
 - o it is important to base reasons for growth management or constraints to water availability
 - o a regional approach is important
 - o growth management is important to acequias
- 8. Manage Drought
 - o drought is a recurring cycle
 - o planning ahead is important in avoiding crisis management
 - o proactive planning approach is beneficial to all parties
- 9. Capture Flood Flows
 - o reduce and protect against flood flows, manage the hydrograph
 - o reduce flood damage
 - o depends on availability of storage and diversion points
- 10. Reuse Wastewater (Graywater)
 - o reuse for irrigation
 - o inject as artificial recharge
 - o reduces demand and eliminates discharge to stream
 - o two to three times more expensive for small communities than larger urban areas
- 11. Remove Trace Elements From Water to Increase Supply
 - o arsenic is the most prevalent and presents the most important concern
 - o if enacted, more water will be available because water with high concentrations of arsenic and other constituents is not being used
- 12. Install Domestic Supply Wells
 - o this involves managing a well field that may consist of one or more well sites
 - o groundwater generally needs less treatment than surface water
 - o groundwater will be more reliable during drought periods
 - o domestic wells may be only alternative in isolated areas

The interim mission and goals were submitted for review, amendment and acceptance to the attendees of the February 2003 Workshops. The preliminary alternatives were discussed and prioritized at the February 2003 Workshops.

12.3.2. Mission Statement

Participants of the Workshops held February 22, 2003 in Cañon and Cuba reviewed the interim Mission Statement and Goals, and the Preliminary Water Management Alternatives (Actions). After much discussion and input, participants revised the interim Mission Statement and Goals and prioritized the preliminary alternatives (actions) while leaving the finalization of the specific language to the RP and RJ Steering Committee.

The Río Puerco Steering Committee worked on and revised the mission statement and goals at their March 5th meeting. The Río Jemez Steering Committee further revised and accepted those revisions at their March 14 meeting. Subsequently, on March 26, 2003, the Río Puerco Steering Committee unanimously accepted the mission statement, and non-prioritized goals which had been revised and accepted by Río Jemez Steering Committee. The sequence of drafts for the mission statement, non-prioritized goals, and prioritized alternatives (actions) are set out in the appendix.

Mission Statement - The residents of the Río Puerco y Río Jemez sub-watersheds promote a sustainable balance between the availability and use of water, promote healthy watersheds, and promote retention of a rural lifestyle to benefit local communities and residents.

12.3.3. Goals

Following the process outlined above, the following are the accepted Non-Prioritized Goals for the subregion:

- *Restore and manage the watersheds on public and private land to enhance water production, retention, and quality, to reduce the threat of wildfire, and to preserve natural systems dependent on water*
- *Support the cultural and spiritual values of water, and the universal need for and importance of water*
- *Ensure treaty, water and acequia rights to preserve and protect local agricultural traditions*
- *Retain land use patterns that support and ensure a rural lifestyle and economy*
- *Promote the conservation of water*
- *Promote education for area residents regarding the connection between land use, water and environmental health, and ways to conserve water. These concepts should be incorporated into the curriculum of area schools*
- *Provide for monitoring the implementation of the water plan*

12.3.4. Alternatives

The following list represents the prioritization of the preliminary Water Management Alternatives (Actions) as well as additions made by the February Workshop attendees:

Prioritized Water Management Alternatives (Actions)	Cuba	Cañon	Total
Protect Water Rights	17	25	42
Manage and Restore our Watersheds	11	15	26
Manage Growth and Land Use Together	7	19	26
Reduce Water Demand	4	8	12
Increase Water Storage Capacity in Rural Areas	6	4	10
Manage Drought	9	0	9
Reuse Wastewater (Graywater)	2	3	5
Identify fire-fighting water	4	-	4
Prohibit sale of water from region	2	-	2
Implement Public Education Program	1	-	1
Install Domestic Supply Wells	1	0	1
Reduce Water Loss in Acequias	1	0	1
Capture Flood Flows	0	0	0
Use Surface and Groundwater in Combination	0	0	0
Remove Trace Elements From Water (increase supply)	0	0	0

The Steering Committee cross-referenced the alternatives to the goals, to ensure that as much of the public comment as possible was included in the final product:

Priority	Alternative	Cross-Reference to the Plan
#1	Protect Water Rights	Goal 3
#2	Manage and Restore our Watersheds	Goal 1
#3	Manage Growth and Land Use Together	Goal 4
#4	Reduce Water Demand	Mission Statement
#5	Increase Water Storage Capacity in Rural Areas	Goal 4
#6	Manage Drought	Goals 1,3,4,5
#7	Reuse Wastewater (Greywater)	Goal 5
#8	Identify Fire-Fighting Water	Goal 4
#9	Prohibit Sale of Water From Region	Goal 3
#10	Implement Public Education Program	Goal 6
#10	Install Domestic Supply Wells	Goal 4
#10	Reduce Water Loss in Acequias	Goal 5
	Capture Flood Flows	Goal 5
	Use Surface and Groundwater in Combination	Goal 4
	Remove Trace Elements from Water (increase supply)	Goal 4

12.3.5. Consideration of MRG Alternatives

In March and April of 2003, the Steering Committees reviewed the Feasibility of Candidate Alternative Actions prepared by the Middle Rio Grande Water Assembly. This Workbook of 78 pages summarized the 44 alternatives under consideration for the Middle Rio Grande Regional Water Plan. The Steering Committees also reviewed several white papers from the Jemez y Sangre Regional Water Plan, specifically on area of origin protection, watershed management and managing growth and land use. (These papers are included in the appendices.) The following chart represents the comparison and actions of the Steering Committee with respect to the alternatives from the Middle Rio Grande Region:

1. Manage and restore our watersheds	A66, p.6 A1, p.8 (change to riparian) A2, p.59 **A33, p.58
2. Reduce water demand	Urban or General: A18, p.22 A21, p.24 A22, p.26 A56, p.28 (applies to all) Agriculture: A7, p.30 A10, p.32 A11, p.36
3. Increase water storage capacity in rural areas	
4. Reduce water loss in acequias	A9, p.34 A60, p.66
5. Protect water rights	A63, p.42
6. Use surface and groundwater in combination	A144, p.44
7. Manage growth and land use together	A30, p.38 A28, p.40 (change to opposite) A52, p.52
8. Manage drought	
9. Capture flood flows	A34, p.60
10. Reuse wastewater (gray)	A24, p.16 A26 p.48 A27, p.18
11. Remove trace elements from water to increase supply	A47, p.46
12. Install domestic supply wells. No comment.	A8, p.64 A61, p.65

12.3.6. Vision Statements and Scenarios

At the end of the February 2003 Phase II Workshops, participants' organized scenario teams. The purpose of the scenario teams was to develop vision statements which would reflect how they would like their subregion to look and function during the next fifty years, especially in relation to water and water use, from various perspectives. The teams were to create visions and scenarios which addressed the mission, goals and three top prioritized alternatives as determined in the workshops.

The scenario teams in the two subregions organized themselves around the following categories of water related issues:

Río Puerco

Agriculture
Environmental/Watershed
Rural Villages
Village Vitality
Do Nothing

Río Jemez

Ag/Ranching
Environmental
Cultural/Religious/Acequia
Suburban/Exurban

For several weeks after the workshops, members of the various scenario teams met to discuss their visions and scenarios, and how to incorporate the publicly-accepted mission statement, goals and alternatives. After developing vision statements, the scenario teams then created a scenario or action plan for achieving their desired vision which included the prioritized alternatives (actions). As discussed in Section 3, the RP and RJ Steering Committee members reviewed the candidate alternatives that had been developed and analyzed for the Middle Rio Grande Region for possible inclusion into the subregional scenarios. The evolution of the vision statements and subregional scenarios, along with a list of scenario team members, can be found in Appendix 2.

12.3.6.1. Río Puerco Subregional Vision Statements

Agriculture and Ranching

The vision of the Cuba area’s agricultural community is to perpetuate the area’s historical, cultural, agricultural, economic and ecological values by becoming actively involved in strategic planning of natural resources, implementing adaptive, viable, effective, and sustainable management practices, rehabilitating farm and range lands, and reducing, and planning rotation of, fallow acres within the area.

We envision preventing conversion of agricultural land to housing and, despite the increasing demand for water in urban areas, keeping water and agriculture in our area. We envision planning and implementing projects that will improve our lands and help to enhance and sustain the community’s agrarian economy into the next century, serving as a role model to adjacent areas in their agrarian and ecological enhancement efforts, providing support to these efforts, and through improved farming and ranching methods, decreasing our contribution of sediment to both the Arroyo San Jose and the Río Puerco.

We envision implementing feasibility studies for construction of water retention facilities, and development of a local agricultural cooperative. With a perpetual source, and appropriate distribution of water a community agricultural cooperative could promote an interest in

traditional crops such as corn, squash, and beans, contemporary crops such as alfalfa, and take advantage of new and emerging crop markets.

Primary Resource Concerns:

- Topography of cropland prevents the efficient application of water.
- Construction of a water storage reservoir (facility) to supply an adequate, perpetual supply of water,
- Need to improve irrigation water delivery systems to prevent water loss to dirt ditches and from broken flumes and culverts; silting in and erosion of ditches; and reduced flow due to invasion of willows, trees and weeds,
- Education about new agricultural technologies and techniques,
- Protection and improved functioning of the watershed to increase water quantity and reduce the risk of catastrophic fire and loss of the watershed.

Natural Balance Scenario

People living within the watershed will understand and live within the natural constraints of climate, fire, soils, and biological communities. Everyone will benefit from a fire-adapted watershed with enhanced water retention and healthier forests, grasslands and watercourses. The landscape will balance wild and cultivated lands that accommodate drought, fire, wildlife, and limited human populations.

In our climate, a properly functioning watershed will act like a sponge, absorbing precipitation and snowmelt, and storing and gradually releasing water from springs and into streams through seasonal spring droughts. It will also minimize runoff and erosion from summer thundershowers by slowing overland, arroyo, and stream flows. Because these watershed functions are primarily dependent on ecosystem conditions and processes, watershed management requires ecosystem management. Forests, woodlands, and grasslands in our watershed have lost much of their ability to carry surface fires, and forests and woodlands have become vulnerable to crown fire, due to a century of fire suppression. The competition among trees for water and nutrients leaves them all more susceptible to drought, insects, and disease, and reduces the ability of the watershed to feed perennial streams and resist erosion.

Sustainable use of water must recognize the dependence of watershed functions on ecological processes, such as fire, and ecological conditions, which are ultimately dependent on human management and use of natural resources. To sustain those ecosystems, management of natural resources must recognize and respect the limits that define the boundaries of sustainability. For example, fire suppression in ecosystems that were adapted to frequent fires extended fire return intervals far beyond their natural limits, and this has been unsustainable, leading to increasingly larger and more catastrophic fires. Likewise, we must recognize and respect ecological limits in the supply and availability of water for human use. Ecological watershed management can capture, store, and release water, but cannot extend it beyond the limits of providence. Ultimately, we must limit our use of water, and other natural resources, to what is available and excess to the needs of the larger ecological community to which we belong.

Rural Communities

A Rural Community vision foresees a future for the Río Puerco watershed which reflects its unique prehistoric and historic, natural, cultural, and economic traditions. This vision takes advantage of modern innovation to accommodate a shift to an ethic that upholds respect for land, water, air, and all living things.

In this vision Community would be built through observance of a spring Water Festival linked to the spring equinox (or Earth Day, or Cinco de Mayo) in which the knowledge of water as a sacred gift is restored. Through the blessing of the local acequias, streams, and wetlands by priests and medicine men, a spiritual approach to water is maintained. A fall harvest festival linked to the County Fair would celebrate the perseverance and cohesion of the communities.

This vision would maintain large areas of mostly vacant and predominantly undeveloped land with limited, low-density residential development, home occupations, and agricultural activities. Rural Agricultural Areas would protect and preserve areas presently and historically used for agricultural practices. These areas would be comprised of predominantly irrigated lands for farming and lands for livestock management. Areas that are within flood plains, or which have hydrologic problems such as storm water ponding, poor drainage, or a high water table, and riparian and wetland areas would be protected from development and would have limited residential uses.

This vision would insure maintenance of a rural lifestyle through land use planning, and laws that prevent development of irrigated or non-irrigated farmland, provide for planned rotation of fallow lands and insure continued existence of acequias and other agricultural pursuits. Surface water would be tied to the land and not be separated from it. Innovative ways to preserve water in the area, such as designating in-stream flow as a beneficial use and water banking would help to preserve an agrarian lifestyle. Self-sufficiency for the subregion would bolster a sustainable economy that would allow those people wanting to live in and preserve the rural lifestyle to stay and do so.

This vision would promote furthering educational pursuits while being able to stay in the area. Education would provide the technological and business skills, and hands on experience needed to create one's own work. Education would be centered on agriculture and natural systems, water and soil conservation, and alternative energy and building.

12.3.6.2. Río Jemez Subregional Vision Statements

Agricultural and Ranching

Agriculture and ranching are a part of the whole ecosystem. For us, they are both a part of our livelihood and of our culture. We highly value the rural nature of the region. Our group would like to see that agriculture and ranching continue to function as an integral part of our region. To ensure this we would like to maintain livestock numbers and the number of acres being tilled

which creates a sustainable lifestyle and healthy environment. We want to implement management practices that are environmentally friendly and sustainable. We also want to maintain diversity of wildlife and livestock.

Many acequias exist in our valley, and have been here for several generations. We want to maintain the tradition of acequias, including their priority of right-of-way. Not so long ago, vegetables and fruits were grown throughout the valley. Now, the reality is that many of us have to work off the land in order to maintain it. So that future generations can continue to farm and ranch, we want to encourage local farmer markets. Community gardens could be a way to share our knowledge with folks who are not farmers by trade.

As stewards, we recognize the importance of nurturing the land and husbanding the water. We look forward to new technology to enhance our conservation of water and preserve the land. Like others in the valley, the paving and building on agricultural lands is of concern. In order to protect the health of the environment and to assure that land stays in agriculture, we would like to see land use management tools implemented to protect the lands from development.

To assist future generations in learning about water, agencies such as Cuba Soil and Water Conservation District will partner with the school district to create a Natural Resource Educational Program.

- Maintain the current livestock numbers and the number of acres being tilled.
- Implement management practices that are environmentally friendly and sustainable.
- Maintain diversity of wildlife and livestock.
- Maintain the tradition of acequias, including their priority of right-of-way.
- Utilize new technology to enhance conservation of water and preservation of the land.
- Encourage local farmer markets to benefit our area and to enable future generations to farm and ranch.
- Share our knowledge with folks who are not farmers by trade by creating opportunities, such as community gardens.
- Implement land use management tools to protect the agricultural lands from development.
- To assist future generations in learning about water, partner with the school district to create a Natural Resource Educational Program.

Environmental Perspective

The environmental vision reflects a shift in attitude from exploitation of the land to stewardship of forests, rangeland and riparian areas. Our children and their children will have the economic and spiritual benefits of ancient forests, free-flowing rivers, living deserts and the abundance of life flourishing in all these areas. The water plan preserves the greatest amount of biological diversity (domestic and wild) while restoring and maintaining a healthy ecosystem. The water plan protects local history and traditions and our land-based economy (including tourism). We envision keeping people on the land by integrating conservation and environmental issues with best management practices in forestry, ranching and agriculture. In the environmental vision, management of public and private lands includes the following:

- maintains healthy and productive plant and animal communities (including threatened and endangered species)
- controls growth by geographical or numerical limits on population
- ensures a healthy watershed
- guarantees good water quality
- educates citizens in water use/reuse

Exurban/Suburban/Development/Growth

In the next 5-10 years one can imagine a vision in which better-planned regional suburban growth occurs in the Jemez and Nacimiento mountain areas to the north of Albuquerque. This plan would try to encourage areas of higher density where there is the most water available, so that water rights need not be transferred. North of Rio Rancho, this growth would gently interact with the existing rural pueblo and ranching lifestyles allowing the area to maintain cultural and religious traditions as well as to maintain the environment. Education of increasing newcomers and tourists will help to minimize conflicts. Water use will be coordinated among the various municipal water systems and the pueblos and conservation practices (industrial, farming, ranching and domestic) will be mandatory.

- Immigration of people to this area to work in clean (eco-friendly) industries nearby
- Continuation of full-time and part-time ranches mixed with new residential dwellings (some loss of agricultural land is inevitable)
- Regional growth planning/zoning with rural as well as urban focus and with water as a consideration
- Maintenance of tribal, religious, and cultural traditions partly via education of newcomers and visitors
- Maintenance of ecological and scenic conditions which have attracted us
- Educational packages made available at Pueblo and Forest Service. Seminars/courses at school
- Mandatory water conservation for industry, farming/ranching and residential uses
- Modernized, well-maintained municipal water systems cooperating with each other
- Tax breaks for installation of gray water and rainwater roof runoff capture
- We don't want to get into limited choices. Continue uses into the future.
- We want to keep the water so we have flexibility in the future.
- Water should stay with the land.

12.3.7. Combined Río Puerco and Río Jemez Sub-Regional Scenario

On May 3 and May 10, 2003, participants at the workshops held in Cañon and Cuba, respectively, were presented with the final mission statement, non-prioritized goals, and prioritized water management alternatives (actions) which had come out of the February workshops. A member from each scenario team then presented their vision statement and scenario. Attendees reviewed and commented on the visions and scenarios and discussed the content of a final combined scenario for the subregion.

After the May 2003 workshops, the scenarios were amended to reflect input from workshop participants. By June the Río Jemez members had combined their list of Objectives and Actions for each Scenario together under the Goals. The Río Puerco members had progressed further and had melded the Scenarios together to create a single subregional scenario. The various scenarios shared numerous common elements, and most of the unique elements were compatible with all scenarios, since they were all generated from the common mission and goals. RP and RJ Steering Committee members then had July to look over the completed subregional scenarios with the aim of melding the two scenarios into one document. (It should be noted that some scenario team members failed to participate, the names of some of the Scenarios were changed, and some were combined.)

In August and September, the RP and RJ Steering Committees met together and worked on combining the two scenarios into one scenario for both subregions. As it turned out, some of the alternatives (actions) were already reflected in the mission statement or goals, hence they were deleted as alternatives. Also, some alternatives were included as either objectives or as actions.

The vision statements, alternatives and scenarios were combined to create the Fifty-Year Water Plan for the Río Jemez and Río Puerco Subregions, found in Section 12.

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