# DRAFT RIO PUERCO SUB-REGIONAL SCENARIO: 2003-2050.

GOAL: RESTORE AND MANAGE THE WATERSHEDS ON PUBLIC AND PRIVATE LAND TO ENHANCE WATER RETENTION AND QUALITY AND TO REDUCE THE THREAT OF WILDFIRE, AND TO PRESERVE NATURAL SYSTEMS DEPENDENT ON WATER.					
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS	
Restore a fire-adapted watershed.	<ul> <li>Thin forests and woodlands in an ecologically sound manner (A-66).</li> <li>Treat grassland brush in an ecologically sound manner.</li> <li>Develop a network of natural and artificial fire and fuel breaks to define 5000+ acre fire management units throughout the watershed.</li> <li>Provide for adequate fire protection of structures to facilitate burning.</li> <li>Apply prescribed fire frequently and extensively to established fire management units.</li> <li>Create defensible spaces around all dwellings and structures.</li> <li>Manage forage utilization to maintain ground cover and carry fire.</li> </ul>	• 30-year project	<ul> <li>New federal fuel reduction and fire prevention funds for public lands.</li> <li>Tax rebates and credits for private land</li> </ul>	<ul> <li>Create many local jobs for sawyer crews, earth moving machinery, and hand crews.</li> <li>Additionally value added industry, and permanent jobs would be created to maintain a healthy watershed.</li> </ul>	

GOAL: RESTORE AND MAN	GOAL: RESTORE AND MANAGE THE WATERSHEDS ON PUBLIC AND PRIVATE LAND TO ENHANCE WATER RETENTION AND QUALITY AND TO				
	E THE THREAT OF WILDFIRE, AND TO	O PRE	SERVE NATURA		
OBJECTIVE	ACTIONS		LENGTH	FUNDING/POLICIES	BENEFITS
Decrease soil erosion and increase water retention and infiltration.	<ul> <li>Expand watershed management programs (A-33).</li> <li>Promote good soil management practices as a necessary corollary to an effective water conservation plan.</li> <li>Reduce and prevent surface water runoff on grazed lands resulting in sheet and rill erosion.</li> <li>Reduce development, and increasing use of unpaved roads.</li> <li>Use low impact agricultural methods such as shallow or no plowing.</li> <li>Apply soil conservation techniques such as installation of field borders, and conservation or no-till methods.</li> <li>Improve grazing management through methods such as: fencing, pasturing, rotational grazing and other methods to reduce overgrazing.</li> <li>Laser level irrigated fields.</li> <li>Line the ditch system, or segments most prone to erosion, with concrete or PVC pipe.</li> <li>Establish groundcover on rangeland.</li> </ul>		Vithin 10 years	<ul> <li>New federal fuel reduction and fire prevention funds for public lands.</li> <li>Tax rebates and credits for private land</li> </ul>	<ul> <li>Reduce general deterioration of the land, and its uses, and increase benefit to landowners and producers.</li> <li>Retain soil nutrients, topsoil and seed.</li> </ul>
Reduce, prevent and repair incising of arroyos to raise the water table and recharge springs and seeps.	<ul> <li>Reduce formation of, and stabilize head cuts, gullies and arroyos.</li> <li>Repair deeply eroded cuts with heavy equipment.</li> <li>Repair smaller cuts with grade stabilization structures, weirs, net wire diversions, rock and brush dams, and other similar methods.</li> <li>Use BMPs to catch soils and fill arroyos.</li> </ul>	• W	Vithin 30 years	<ul> <li>New federal fuel reduction and fire prevention funds for public lands.</li> <li>Tax rebates and credits for private land</li> </ul>	<ul> <li>Reduce general deterioration of the land, and its uses.</li> <li>Retain soil nutrients, topsoil and seed.</li> <li>Increase benefit to landowners and producers.</li> </ul>

GOAL: RESTORE AND MANAGE THE WATERSHEDS ON PUBLIC AND PRIVATE LAND TO ENHANCE WATER RETENTION AND QUALITY AND TO					
	E THE THREAT OF WILDFIRE, AND TO				
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS	
Rehabilitate freshwater areas. Reduce, prevent, and repair habitat loss along streams, ephemeral waterways, and in wetlands.	<ul> <li>Re-vegetate along streams and ephemeral waterways, plant willow and cottonwood trees at unstable banks and along non-vegetated segments.</li> <li>Construct fencing to protect riparian and wetland areas, and plantings from livestock.</li> <li>Stabilize channel banks by installing J-Hooks and other similar structures.</li> <li>Re-create and induce stream meanders.</li> <li>Prohibit development in areas within flood plains, or which have hydrologic problems (storm water ponding, poor drainage, high water table).</li> <li>Prohibit development in wetlands or riparian areas.</li> </ul>	•		<ul> <li>Guard against water reduction, and loss of important plant species such as willow and cattails in drought years, and both silting up and scouring out of important wetlands due to flooding during years of heavy precipitation.</li> <li>Improve degraded riparian and wetland habitats to provide both winter and summer habitat for numerous wildlife species, and migratory birds</li> </ul>	
Increase both the bio- diversity and production of rangelands, and croplands.	<ul> <li>Work with relevant agencies to manage sagebrush monocultures and reduce numbers of juniper trees.</li> <li>Control or eliminate noxious, invasive, and non-native weed species (A-1).</li> <li>Seed with native grasses, and plants.</li> <li>Develop grass banks and other cooperative mechanisms to reduce grazing during drought.</li> </ul>	Within 20 years	•	<ul> <li>Benefit the watersheds.</li> <li>Using work corps and student labor, remove non-native vegetation from riparian areas.</li> <li>Increase forage, native grass production, and groundcover.</li> <li>Increase benefit to landowners and producers.</li> </ul>	
Provide for an increased, consistent and sustainable source, and adequate distribution of rangeland water.	<ul> <li>Drill wells for development of alternative upland water.</li> <li>Install improved well pump technology on existing wells.</li> <li>Install water pipelines and drinking troughs.</li> <li>Use various methods to reduce competition for forage between livestock and wildlife.</li> <li>Prohibit sale of water out of subregion.</li> </ul>	•	•	<ul> <li>Reduce general deterioration of the land, and its uses.</li> <li>Increase water availability and distribution to reduce competition for water resources between livestock and wildlife.</li> <li>Achieve a balanced animaluse pattern across the landscape to reduce overgrazing, and increase size and productivity of wildlife and livestock.</li> </ul>	

OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS
	<ul> <li>Promote appreciation of the dependence of all life on water.</li> <li>Promote the sanctity of watercourses.</li> <li>Promote a spring water festival in which knowledge of water as a sacred gift is restored by blessing of the local acequias and streams by priests and medicine men.</li> <li>Promote a fall harvest festival linked to the County Fair to celebrate the perseverance and cohesion of rural agricultural communities.</li> <li>Promote water events throughout the year to keep people focused on the importance of water and soil management.</li> <li>Develop public parks and interpretive areas along perennial streams near villages.</li> <li>Develop adopt-a-watercourse programs.</li> <li>Develop community gardens.</li> </ul>	Within 30 years integrate community and spiritual leaders around water and land care.		

GOAL: ENSURE TREATY, WATER AND ACEQUIA RIGHTS TO PRESERVE AND PROTECT LOCAL AGRICULTURAL TRADITIONS.				
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS

GOAL: ENSURE TI	REATY, WATER AND ACEQUIA RIGHTS	S TO PRESERVE AND I	PROTECT LOCAL AGRICULT	TURAL TRADITIONS.
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS
Create agriculture conscious communities.	<ul> <li>Form local agricultural cooperatives to maintain productivity of agricultural lands in local communities.</li> <li>Support acequia and agricultural land improvement programs.</li> <li>Develop mechanisms to prevent transfer of surface and ground water rights from their locality. (Prohibit sale of water out of sub-region).</li> <li>Solicit funds from state and federal government agencies to map, catalog, and describe acequias including annual water use.</li> <li>"Rural Agricultural Areas" would protect and preserve areas presently and historically used for agricultural practices.</li> <li>Develop water banking to maintain local water rights.</li> <li>Meter all surface water diversions (A-7).</li> <li>Authorize in-stream flow as a beneficial use (A-63).</li> <li>Address ground/surface water interactions in state water-rights statutes (A-144).</li> <li>Identify, quantify, and adjudicate surface water rights and order of wet water utilization (A-71)</li> </ul>	Within 30 years have Legislators at every level integrate protection of water for agriculture into current and new statutes.		

GOAL: RETAIN LAND USE PATTERNS THAT SUPPORT AND ENSURE A RURAL LIFESTYLE AND ECONOMY.					
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS	
Protect and improve the quality of the domestic supply of surface and ground water.	<ul> <li>Identify and protect groundwater recharge areas (A-47).</li> <li>Limit and reduce vehicular low-water stream crossings.</li> <li>Clean up watercourses, remove garbage, trash, and vehicles from arroyos.</li> <li>Require sewage treatment systems in higher density communities (A-26).</li> <li>Use constructed wetlands for final sewage treatment (A-36).</li> <li>Remove trace elements.</li> </ul>	• Within 10 years	New federal & state taxes and tax incentives and rebates.	•	

GOAL: R	GOAL: RETAIN LAND USE PATTERNS THAT SUPPORT AND ENSURE A RURAL LIFESTYLE AND ECONOMY.					
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS		
Provide for increased, consistent and sustainable sources of both domestic and irrigation water.	<ul> <li>Work with relevant agencies to implement projects to thin trees and brush on public and private land.</li> <li>Work with relevant agencies to implement controlled burn projects on public and private land, and along the irrigation ditches.</li> <li>Construct water storage reservoirs or other storage facility.</li> <li>Install Domestic supply wells.</li> <li>Identify and provide for residential fire-fighting water.</li> </ul>	• Within 10 years	New federal & state taxes and tax incentives and rebates.			
A program that systematically fosters a greater cooperation among various sectors of the communities with water as a primary focus.	<ul> <li>Manage growth within the limits of water, and a rural landscape (A-52).</li> <li>Adopt policies to integrate land use planning and water resource management (A-30).</li> <li>Maintain large areas of mostly vacant and predominantly undeveloped land.</li> <li>Authorize no well permits on tracts of less than 40 acres.</li> <li>Require water availability before land subdivision.</li> <li>Limit residential development to low-density housing.</li> </ul>	•		•		

GOAL: R	GOAL: RETAIN LAND USE PATTERNS THAT SUPPORT AND ENSURE A RURAL LIFESTYLE AND ECONOMY.					
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS		
Create a sustainable economy that bolsters self-sufficiency of the sub-regional communities, and helps prevent loss of the agrarian lifestyle.	<ul> <li>Develop local agricultural cooperatives.</li> <li>Develop markets for local agricultural products (A-11).</li> <li>Promote a Farmers' Market, and sale of locally grown produce and meat.</li> <li>Use creative marketing of livestock (organic, predator friendly, low-impact).</li> <li>Promote development of a diversity of crop markets including; native and traditional crops, contemporary crops, and new and emerging crops.</li> <li>Implement new farming technologies that will help to increase production.</li> <li>Plan and maintain a schedule for rotation of fallow acres.</li> <li>Reduce the amount of presently fallow cropland, and prevent further cropland being taken out of production.</li> </ul>	• Within 50 years	<ul> <li>Accomplished by passage of state statutes, and rigorous integration of county, state, &amp; federal policies and process.</li> <li>Promote a "Very-Small-Business Center".</li> <li>Promote "locally-owned" businesses.</li> <li>Work with local banks, Acequia, and Stockmen Associations to aid local agricultural producers who lack financial resources.</li> <li>Provide low interest loans for enterprises that promote a rural lifestyle, cottage industries, eco-tourism, and co-operatives.</li> </ul>	Water use will match water supply.     Agricultural Cooperatives will promote and sustain agriculture through:.     Education, financial support, improved farming methods, crop diversity, shared use of equipment and teaching children about the importance and benefit of agriculture, and good agricultural conservation methods.		
Increase efficiency of irrigation ditch system.	<ul> <li>Develop protective zoning for acequia irrigated lands.</li> <li>Use land use planning, and laws to prevent development on irrigated or non-irrigated farmland.</li> <li>Prohibit sale of water out of subregion.</li> <li>Develop a consistent and sustained supply, and distribution of irrigation water.</li> <li>Provide annual maintenance to all irrigation ditches (mains and laterals).</li> <li>Repair and construct head, and farm gates for water control.</li> <li>Line irrigation ditch systems and laterals, where necessary, with concrete or PVC pipe.</li> <li>Repair blown out culverts and broken flumes.</li> <li>Redirect ditches to reduce gradient where possible.</li> <li>Reduce and prevent increased incising of irrigation ditches.</li> <li>Re-contour segments of ditches that have become channelized.</li> </ul>			<ul> <li>Provide a topography that makes application of water to fields more.</li> <li>Reduce sheet and rill erosion which causes channelization.</li> </ul>		

GOAL: PROMOTE CONSERVATION OF WATER.					
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS	

GOAL: PROMOTE CONSERVATION OF WATER.					
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS	
• Water wise residents and communities.	<ul> <li>ACTIONS</li> <li>Disseminate water-saving information (A-56).</li> <li>Develop water budget to understand water recharge and water use.</li> <li>Develop local water conservation and drought plans (A-18).</li> <li>Fund domestic water cooperatives to improve their water systems.</li> <li>Fund acequias to increase operating efficiency (A-60).</li> <li>Adopt graduated water rates in all domestic systems (A-21).</li> <li>Adopt a conservation fee added to all water systems for promotion of water conservation.</li> <li>Promote adoption of domestic watersaving technologies (A-22).</li> <li>Promote greywater reuse (A-24).</li> <li>Encourage rainwater harvesting (A-44).</li> <li>Improve storm water management (A-34).</li> <li>Use agricultural methods that reduce water utilization.</li> <li>Reduce water loss in acequias.</li> <li>Promote projects to increase irrigation efficiency (A-10).</li> <li>Reduce artificial open water evaporation (A-45).</li> </ul>			• Public understanding of water conservation will increase.	
	<ul> <li>Meter all water supply wells (A-8).</li> <li>Limit wells that could impair surface or groundwater (A-61).</li> <li>Capture flood flows.</li> </ul>				

OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS
<ul> <li>Create water conscious communities by providing education centered on soil and water conservation, and alternative energy and building methods.</li> <li>Studies show a close link between detrimental impacts to the local ecology and economic losses of local producers.</li> </ul>	<ul> <li>Develop school curricula and outdoor projects on these subjects.</li> <li>Develop school curricula concerning water conservation (A-56).</li> <li>Develop school curricula concerning water conservation methods, such as, mulching, composting, swales, rain barrels and other catchment systems, and uses hands on training.</li> <li>Work with local schools to involve children and young adults in agriculture.</li> </ul>	Within 10 years ensure every education level includes water and land use curricula.	Funding will support this education process (as above).	<ul> <li>Public understanding of the:.</li> <li>idea of healthy land and healthy watersheds as personal and community wealth.</li> <li>sacredness of water.</li> <li>interrelationship of water and land management in watersheds.</li> <li>roles of watersheds to store and release winter snowmelt and dissipate summer downpours.</li> <li>central roles of climate and fire in the ecology of natural communities.</li> <li>natural limits to the productivity of land.</li> <li>natural limits to plant, wildlife and human dependence on land.</li> <li>factors conducive to erosion, and methods to reduce or prevent it.</li> <li>importance of riparian and wetland areas.</li> <li>alternative methods of livestock handling, such as: fencing, pasturing, rotational grazing and other methods to reduce overgrazing and erosion.</li> <li>relevant contemporary farming technologies and practices, such as: low impact agricultural methods-shallow or no plowing-, alternative and expanding crop markets.</li> <li>benefits, and means of water conservation.</li> </ul>

GOAL: PROMOTE EDUCATION FOR AREA RESIDENTS REGARDING THE CONNECTION BETWEEN LAND USE, WATER AND ENVIRONMENTAL HEALTH, AND WAYS TO CONSERVE WATER.							
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS			
Provide a secondary education facility.			Funding will support this education facility (as above).	<ul> <li>Allow local residents to stay in the area.</li> <li>Teach technology and business skills needed to develop water and land centered occupations and enterprises.</li> <li>Train youth to create occupations, mini businesses and enterprises.</li> </ul>			

GOAL: PROVIDE FOR MONITORING THE IMPLEMENTATION OF THE WATER PLAN.						
OBJECTIVE	ACTIONS	LENGTH	FUNDING/POLICIES	BENEFITS		
Public participation in the water planning process and water management.	<ul> <li>Increase monitoring and modeling of surface and groundwater (A-38).</li> <li>Develop geographic watershed information system (A-73).</li> <li>Maintain watershed steering committees.</li> <li>Fund ongoing water planning (A-58).</li> <li>Ensure continued public participation in water issues (A-53) through local water assemblies.</li> </ul>	Within 20 years	Use state and federal support.     Legislation will create and support citizen water assemblies/forums until their functions can be integrated into all levels of executive and legislative branches	•		

#### THE BEST PLANS HAVE CLEAR VISIONS, GOALS, AND ACTION ITEMS

In addition to visions, groups usually develop goals, objectives, and action items. The difference among them is explained below.

**Visions** - general statements of where the effort wants to go and what it will accomplish over a given time span (usually 10 to 50 years). Visions should be comprehensive enough to capture the thrust of the effort's overall mission.

Goals - less general than visions, describe what is needed to obtain vision, refer to components of overall effort, sometimes quantifiable.

**Objectives** - elaboration of goals, describe types of management or activities and are quantifiable where possible. Objectives are optional. Some groups may find that additional level of detail confusing.

**Action Items** - explain who is going to do what, where, and when; they generally articulate how to implement the objectives and should be quantified if possible; benchmarks of existing conditions and/or indicators should be developed for action items.

#### **RPyRJ 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.

IV. Reduce Water Demand, "Balance Demand and Use"

The Alternatives can be found listed either as a Goal, distributed under the Goals, or contained in the Mission Statement as follows:

RPyRJ Prioritized Alternatives	(Canon, Cuba)	Where Listed
I. Protect Water Rights	(17, 25=42)	Goal 3
II. Manage and Restore Our Watersheds	(11, 15=26)	Goal 1
III. Manage Growth and Land Use Together	(7, 19=26)	Under Goal 4
IV. Reduce Water Demand, "Balance Demand and Use"	(4, 8=12)	In Mission Statement
V. Increase Water Storage Capacity in Rural Areas	(6, 4=10)	Under Goal 4
VI. Manage Drought	(9, 0=9)	Under Goal 5
VII. Reuse (Grey) Wastewater	(2, 3=5)	Under Goal 5
VIII. Identify Fire-Fighting Water, "Provide for Residential Fire Protection" [2/22]	(4, -)	Under Goal 4
IX. Prohibit Sale of Water From Region, "Don't Sell Water Out of the Area" [2/22]	(2, -)	Under Goals 1, 3, 4
X. Reduce Water Loss in Acequias	(1, 0=1)	Under Goal 5
XI. Install Domestic Supply Wells	(1, 0=1)	Under Goal 4
XII. Implement Public Education Program [2/22]	(1, -)	Goal 6
XIII. Capture Flood Flows	(0, 0)	Under Goal 5
XIV. Use Surface and Groundwater in Combination	(0, 0)	Under Goal 3
XV. Remove Trace Elements From Water to Increase Supply	(0, 0)	Under Goal 4

### 4-2-03 Non-Prioritized Goals combined with Alternatives and Workshop Comments

1 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.

- II. Manage and Restore Our Watersheds (11, 15= 26)
- IX. Prohibit Sale of Water From Region [2/22] (2, -) "Don't Sell Water Out of the Area"

Use a regional approach.

Reduce wildfire hazard.

Use Best Management Practices (BMPs) to minimize negative vegetation effects on water quality and quantity.

Use Best Management Practices (BMPs) to improve stream channel health.

Use Best Management Practices (BMPs) to reduce and protect against flood flows.

Line and repair acequias where necessary to reduce or eliminate erosion.

Maintain dirt acequias where possible to recharge groundwater.

Create local employment and economic benefits through projects which maintain a sustainable ecosystem.

# 2 Support the cultural and spiritual values of water, and the universal need for and importance of water.

Acequia and Tribal issues for water use and management should always be recognized.

## 3 Ensure treaty, water and acequia rights to preserve and protect local agricultural traditions.

I. Protect Water Rights (17, 25 = 42)

IX. Prohibit Sale of Water From Region [2/22] (2, -) "Don't Sell Water Out of the Area"

Protect Water Rights.

Don't sell water out of the area.

#### 4 Retain land use patterns that support and ensure a rural lifestyle and economy.

Do not sacrifice rural communities and their way of life to provide water for growing municipalities.

Use a regional approach.

Manage growth and land use together to maintain a sustainable community.

Balance reasons for growth against water availability constraints.

Balance growth with the needs and importance of acequias.

Increase water storage capacity in rural areas to add flexibility in water management, help protect against drought, and aid in fire suppression.

III. Manage Growth and Land Use Together (7, 19= 26)

V. Increase Water Storage Capacity in Rural Areas (6, 4=10)

VIII. Identify Fire-Fighting Water [2/22] (4, -) "Provide for Residential Fire Protection"

IX. Prohibit Sale of Water From Region [2/22] (2, -) "Don't Sell Water Out of the Area"

XI. Install Domestic Supply Wells (1, 0=1)

this involves managing a well field that may consist of one or more well sites

groundwater generally needs less treatment than surface water

groundwater will be more reliable during drought periods

domestic wells may be only alternative in isolate areas

XIV. Use Surface and Groundwater in Combination (0, 0)

common sense alternative

use surface water in wet years, groundwater in dry years

XV. Remove Trace Elements From Water to Increase Supply (0, 0)

arsenic is the most prevalent and presents the most important concern

if enacted, more water will be available because water with high concentrations of arsenic and other constituents is not being used Provide for residential fire protection.

#### 5 Promote the conservation of water.

VI. Manage Drought (9, 0=9)

VII. Reuse (Grey) Wastewater (2, 3=5)

X. Reduce Water Loss in Acequias (1, 0=1)

XIII. Capture Flood Flows (0, 0)

# 6 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.

XII. Implement Public Education Program [2/22] (1, -)

Plan ahead to avoid crisis management during drought since it is a recurring cycle.

Create proactive management plans.

Provide more and better precipitation/forecasting stations

Reduce water demand and balance its use with availability.

Every water user should create their own water budget.

Use incentive pricing to generate significant water savings.

Reuse wastewater (graywater) for irrigation.

## 7 Provide for monitoring the implementation of the water plan.

#### Water Assembly Alternatives with our Alternatives- (only a start)

A. A-63 Change state water law to include in-stream flow as a beneficial use. Under current law, to maintain a water right, you must put it to beneficial use. Water flowing in the river, known as "in-stream flow," has not been declared a beneficial use in New Mexico. However, the health of the river affects ground water levels, as well as plants and animals that live in the river (riparian) environment. By determining beneficial use of an acequia or natural stream to include in-stream flow there would be some legal protection for maintaining riparian areas by simply permitting water to flow in its course.- Under Goal 3

- B. A-71 Identify, quantify, and adjudicate all surface water rights and the order of wet water utilization in the water planning region. Adjudication is the legal process of reviewing all surface water rights claims in an area to determine which are actually defensible. The process results in a clear accounting of how much surface water may be used and by whom. Currently, on average, there are more claims than there is water, so this process would clarify who must stop using water during a water shortage Under Goal 3.
- C. A-30 Adopt policies to integrate land use planning and water resource management in all government jurisdictions in the Middle Rio Grande water planning region. Take water supply limitations into account when making land use development decisions. Develop mechanisms for local governments to adopt policies that coordinate water impact considerations with all land development and other uses of water.- Under Goal 4
- D. A-8 Meter all water supply wells, including domestic wells, throughout the water planning region. Under the current system, domestic wells owners are allowed up to 3 acre-feet per year. Metering is not required so there is no way to monitor actual water use. Once the amount of water being used is known, there may be an incentive to use less of it, plus pre-existing withdrawal could be easier to define & protect.- Under Goal 5
- E. A-61 Reduce the allowed pumping from domestic wells and restrict drilling of domestic wells where surface waters or the aquifer could be impaired. This alternative requires that well metering be in place. Unrestricted groundwater removal can decrease surface flows, deplete aquifers, & diminish pre-existing access.- Under Goal 5
- F. A-69 Acquire additional water rights without condemnation from various sources from within or outside the water-planning region, and import water from other basins where possible. Under NM law, water rights are a property right and can therefore be condemned if it is in the public interest to appropriate the water for another use. It is becoming increasingly difficult to find willing sellers and the cost to purchase and transfer water from place to place is quite high.- NO.
- G. A-144 Address groundwater/surface water interactions in the statutes for administering water rights. There is a connection between surface water and shallow ground water. That is, by extracting groundwater, surface water will percolate down to the shallow groundwater and "fill in" the volume of water that has been pumped. This interaction has a time lag and will not be immediately observable. For groundwater wells near the river, the effect may take days or weeks depending on the separation distance. For groundwater wells further away, the effect could take weeks or years. One example of the need for this accounting of the interaction of surface water and groundwater is that a junior water rights holder who has pumped groundwater, could later "infringe" on the water supply to senior surface rights holders, particularly during a time of drought.
  Under Goal 3
- H. A-7 Meter and manage surface water distribution flows through all irrigation systems to conserve water. Allows the accurate measurement of permitted water use and

associated losses. Metering by itself may encourage conservation & support claims.- Under Goal 3

# Also used:

1, 10, 11, 18 21, 22, 24, 26 33, 34, 36, 38 44, 45, 47

52, 53, 56, 58 60, 66 73