Historical Archive G-3

Community Conversations 1-3

Concerned about water in our region?
Want to know more?
Join us for a series of events
to increase understanding about our water picture
and ensure that the picture reflects our values and concerns
as we begin to plan.

Public Participation Program

Middle Rio Grande
Regional Water Planning

a cooperative effort
between

Middle Rio Grande Water Assembly
&
Middle Rio Grande
Council of Governments

Conversation II. "Balancing our Water Budget - What do we want the future to look l

Regional Forum
Blending Visions

Conversation III. "Water Budget Constraints - What Do We Do About Them?"

Public Hearing
Adopt Goals and Objectives

Next Steps - Next Year

Schedule of Events

'Balancing our Water Budget"
Community Conversations
6:30 - 9:30 pm at each location

Series I - What Do We Hold Dear?
- a facilitated discussion to identify concerns and issues

- July 24, 2000 - Los Lunas High School Cafeteria

- August 22, 2000 - Rio Rancho City Council Chambers
- August 23, 2000 - Town of Bernalillo Council Chambers
- September 5, 2000 - Indian Pueblo Cultural Center, Albuquerque (Silver & Tu

Series II. What do we want the region to look like in the future?
- a facilitated discussion to identify goals and objectives

- August 8, 2000 - Los Lunas High School Cafeteria
- September 11, 2000 - Rio Rancho City Council Chambers
- September 13, 2000 - Town of Bernalillo Council Chambers
- September 19, 2000 - Indian Pueblo Cultural Center, Albuquerque (Silver & T

Regional Forum - Blending Visions
- a facilitated discussion to develop region-wide goals and objectives

- November 4, 2000 - Indian Pueblo Cultural Center, Albuquerque (Special Eve

Series III - Constraints - What Do We Do About Them?
- a facilitated discussion to identify preliminary alternatives
plus review those culled from the earlier conversations

- November 9, 2000 - Rio Rancho City Council Chambers
- November 14, 2000 - Los Lunas High School Cafeteria
- November 15, 2000 - Town of Bernalillo Council Chambers
- November 20, 2000 - Indian Pueblo Cultural Center, Albuquerque (Silver & Tu

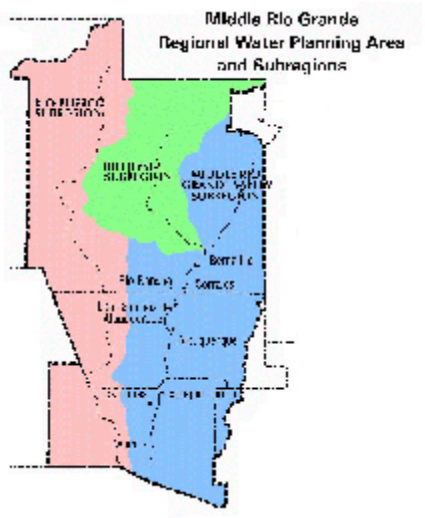
Public Hearing
Adopt Goals and Objectives

- December 13, 2000 - 6:00-9:00 pm - Middle Rio Grande Council of Governments (tentative date and place)

Next Steps - Next Year

Conversation 4: "Water Budget Options - Living within Our Means"
Before any plan is proposed, the draft will be discussed and reviewed

Water. Water is life. Here, water is scarce. For each of us, water evokes di
different ideas of what is important. If there were to be shortages, how shou
resource be shared? What about in the future?



One way to answer these questions is through regional water planning. Such a program begins with the collection and analysis of many types information related to water supply and demand. addition to physical constraints, the plan mus take into account the cultural, environmental, economic aspects of water use, as well as lega institutional issues. To be fair and equitable regional water plan must integrate these issue and provide for a sustainable water supply.

This planning process is underway in 16 regions throughout New Mexico. In our region - Bernalillo, Sandoval and Valencia Counties - this effort has been undertaken by the Middl Water Assembly in partnership with the Middle Rio Grande Council of Governmen

For any plan to be effective, it must include the concerns, comments and ideas of basin resi based water planning process will allow diverse stakeholder groups within the region to forr thereby ensuring that the water needs of all citizens are considered.The interests within th make up the pieces of the water planning puzzle. Putting these pieces together into a compre plan is our task.

Such a plan must balance water supply and demand in a way that respects regional values. It common vision for balancing a diversity of water uses based on the values of the region's ci

Please share your opinions on the region's water problems and your insights into how best to resources.

Public participation is crucial to the development and implementation of a regional water pl

from the Regional Water Planning Handbook --

Public participation must be the significant factor in development of regional plans.

You must participate if the plan is to be successful.

Help us put the pieces together!

Participation in the whole process is encouraged. Each step of the process bu previous step. Values and concerns will help participants identify goals and

Process

Compiling the Water Picture

The Water Budget

(explain)

The Water Picture
- What we Know Now

To begin the dialogue, a presentation of the current water picture is availa
provide a better understanding of the present situation and the ensuing proce

Conversation I. "Balancing our Water Budget - What Do We Hold Dear?"

FURTHER INFORMATION

For more information about where *The Water Picture - What we Know Now* shows
scheduled or to schedule one, please check the website <www.waterassembly.org>
Bean <surich@earthlink.net>

Middle Rio Grande Water Assembly
P.O. Box 9844
Albuquerque, NM 87117-9844
http://www.waterassembly.org
http://www.mrgcog.org

Middle Rio Grande Council of Governments
Jim Gross, Director of Water Planning
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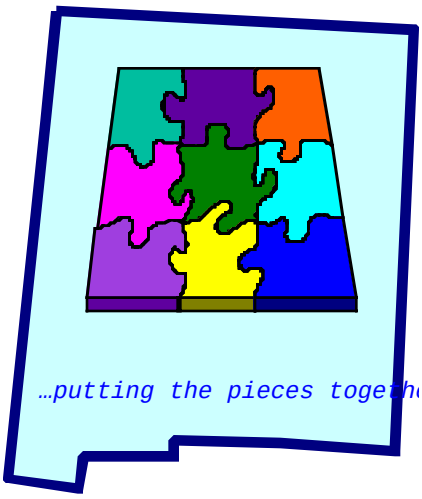

Water Unites Us!
¡El Agua nos Une!

Middle Rio Grande Regional Water Plan
Community Conversation on Issues and Problems

sponsored by the
Middle Rio Grande Council of Governments
and the Middle Rio Grande Water Assembly

Agenda

6:30 Welcome and Introductions
Overview of the evening
Purpose of this Meeting
Review agenda, format and ground rules for the meeting
Survey

6:45 Presentations:
•DRAFT Middle Rio Grande Water Budget – where it stands now
•The Regional Water Planning Process
•Implementation of the plan
Brief Question and Answer period

7:30 Conversation: Facilitators will help participants identify the issues and problems that concern them most. Small groups will self-select around each topic and talk about the following:

•Define the issue/problem
•What is the geographic scope of the issue/problem?
•Who is hurt and who is helped by this issue/problem?
•Why is this issue/problem important to me?

8:30 Report from the issue/problem groups
General discussion about each issue/problem
Identification of common themes and common ground
Final remarks and evaluation of the workshop

9:30 Adjourn

Middle Rio Grande Regional Water Plan

Community Conversation:
Issues and Problems

Los Lunas, Monday, July 24, 2000,
6:30 - 9:30 pm, High School Cafeteria

Introduction: This is an attempt to capture the ideas and the tone of the community conversation in Los Lunas on July 24, 2000. Sponsors of the event were the Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots based organization. Richard Jaramillo, Belen city councilor, opened the meeting, and Lucy Moore facilitated, with help of co-facilitators Victoria Garcia and Nan Nash. Jim Gross for the MRGCOG and Elaine Hebard for the Water Assembly gave brief presentations on the water planning process and the draft water budget currently being developed. There were questions during the presentations about the source and credibility of the figures in the budget, and the perceived bias against the farming community in the choice of categories and figures to include in the presentations.

The audience identified the problems and issues they wanted to talk about, and broke into small groups around those issues. Volunteer recorders helped document the discussion. During those conversations many potential solutions were raised to address some of the problems. Although this conversation was for the purpose of discussing problems and issues, the planning staff and volunteers were very grateful to have these solution ideas put forth. At the end of the summary is a list of these potential actions and solutions for reference as this process moves along.

Themes Identified at the End of the Meeting: After hearing the small group reports (described below), the audience identified some themes common to many of the presentations. There was no effort to reach agreement on the themes; they were simply identified to give a picture of some of the values and concerns that underlie the Los Lunas perspective.

There are a lot of unanswered questions that remain, and it is important to those in the valley to help create those answers as much as possible.

- Farming is good for the environment
- Water in the region needs to stay within the region.
- The inevitable competition for resources needs to be well managed, to avoid or minimize the fighting.
- Planning is overshadowed and often driven by political problems.
- The amount of available water should determine the amount and kind of growth.
- Farmers and environmentalists share a love of nature, as well as common enemies.
- Farmers feel under attack.
- History is important to remember. There are documents, treaties, and wisdom which are key components in good planning today.
- People from Albuquerque need to hear our perspective.

Small Group Reports: Those attending the community conversation chose their own problems and concerns, and broke into small groups to discuss them. Below are summaries of the discussion in each small group, from their oral report and from their flip chart notes.

Group 1: Population Growth Requires Immediate Action which Government will not Address

Definition of the Problem:
- § There are different kinds of "growth" – increase in numbers, increase in density, or economic growth.
- § Growth must be balanced, not pitting farmers against municipal and industrial interests.
- § Albuquerque needs to control its growth, and accommodate ours, which is modest.
- § Water is a finite resource. We could allocate a certain amount per sector, and not allow transfers. It is not fair that farmers are the only ones threatened with water being turned off.
- § The Silvery Minnow and the farmers co-existed until the population explosion in the 90's.
- § There is no tax base for quality economic growth. There is no infrastructure to support growth.
- § Albuquerque and other major municipalities must control growth, in order to stem the separation of water from land, as water is transferred from agriculture to municipal uses. Water should be tied to the land.
- § Farmers are protecting the valley from wall-to-wall housing.
- § The reality is that growth will continue until we run out of water.... then what will it look like?

Geographic Scope:
- § Global and local

Why is this important:
- § If farmers lose water, they will lose the ability to feed themselves locally. The valley may become one big ghost town.
- § Farming protects land and water resources against inappropriate population growth.
- § We don't want traffic jammed "to Kingdom come."
- § We want our kids and grandkids to be able to live here.

Group 2: Survival of Agriculture/Threat from Cities

Definition of the Problem:
- § Inability, undesirability of separating water form land. Permanent transfer of water form land is very damaging. Selling rights, and then drilling a well, is also harmful.
- § Shallow and domestic wells must be accounted for.
- § Transfer of water from agricultural to development should be taxed.
- § Agriculture can become more efficient:
- § quantify use
- § avoid evaporation
- § water at night
- § level fields
- § limit watering time
- § choose water-efficient crops
- § clear noxious weeds
- § use Russian Olive for firewood

§ Need unbiased studies
§ Need to charge Texas with the evaporation from Elephant Butte
§ Need to protect acequias
§ There is too much overlap of rules because of multiple government agencies.
§ Need to promote farmers' markets for higher value crops – "no smudge pots"
§ Can buy development rights to protect agriculture.
§ Farmers must work together to fight the water grab by cities.
§ There is potential for alliance between farmers and environmentalists, but the minnow seems to be driving us apart.
§ Farmers should have a say in decisions about the growth of cities.
§ Cities can encourage farming by giving tax breaks, not fighting over water, reducing golf courses, recycling water.

Geographic Scope:
§ Entire Rio Grande Valley, Colorado to Texas

Who is hurt:
§ Farmers and their heritage

Who is helped:
§ All other users, especially urban

Group 3: Historical Perspective

Definition of the Problem:
§ It is crucial to remember the history of the river, and how it used to be
§ It is valuable to exchange personal and community histories about the river – like the eels that used to thrive there
§ Contamination of the river is currently a very serious threat, to farmers, and all living things
§ Newcomers need to learn how to conserve and respect the river and all water resources, and use the water wisely

Group 4: How to Develop Solutions to Water Problems Given Population Growth

Definition of the Problem:
§ Unrestricted population growth
§ Growth helps the county tax base, but there must be a supportable infrastructure
§ Planning must involve the residents of our area, as well as businesses, such as farms, real estate, developers, banks, etc.
§ Zoning issues are currently controlled by developers, banks, etc.
§ Priorities for water use should be based on people first
§ COG is an advisory body, for planning and funding; let local interests create solutions and set priorities

Geographic Scope:
§ Water knows no political boundaries; therefore water is a shared resource

§ There is an issue of urban v. rural

Who will be hurt:
§ Everyone who uses water
§ Those who can least afford it, will be the most negatively affected, especially farmers, those in town, the schools, the prison population

Who will be helped:
§ County tax base

Group 5: Banning High Water-Consumptive Industry

Definition of the Problem:
§ We need to rethink economic development. We need to find economic development which sustains the ecosystem
§ Parameters must be established to determine the acceptance of new industry based on water use and environmental impact and employment. We need a checklist to evaluate potential projects so that we don't have to fight each plant separately.
§ The relationship between amount of water used and number of jobs must be looked at carefully.
§ We need to start with a vision of what we want to preserve, and then choose the industry accordingly

Geographic scope:
§ statewide

Who is hurt:
§ All of us who share the water and the air are hurt, as well as the wildlife, by high water-consuming industry.

Why is this important:
§ We love nature. Human beings need to work with nature for their own survival. This is irreplaceable.
§ Farming is a valuable industry that provides recharge for the aquifer and land for wildlife.

Group 6: Unsound Science

Definition of the Problem:
§ No credit is given to farmers for recharge and return flow. The media, presentations, and planning efforts seem to have a propaganda campaign against farmers.
§ Water budget figures and projections are questionable. The source and derivative for the population data is unclear, and the projections about use are, therefore, unreliable.
§ Knowledge about the Silvery Minnow is inadequate to support the decisions being made.
§ The farmer has data on the Silvery Minnow, including its ability to survive dry river spells.
§ The farmer is a source for a lot of good information. Farmers have learned from their mistakes (pesticides, for example) and have much to offer the scientific world.

§ Without irrigation, the valley will be seriously impacted. Wildlife will be hurt, and there will be fields of noxious weeds.
§ Challenge scientists to look at the real world.
§ Need more data and clearer presentaion on:
§ surface drainage and internal drainage (farming practices)
§ domestic well usage
§ amount of water diverted and returned – actual, not calculated
§ amount of evaporation
§ benefits to wildlife in irrigated fields
§ contamination sources, including oil from cars, asbestos from brakes, etc. in Alb.
§ Inaccurate data can impact this region's share of water

Geographic Area:
§ Middle Rio Grande planning region
§ State – how accurate is their data?

Who is helped:
§ Big developers can buy paper water

Who is hurt:
§ The community and all its members are hurt from impacts to the culture and lifestyle of the valley

Why is this important:
§ Unsound science impacts the culture of the valley and the lifestyle.
§ Bad science leads to bad decisions which impact lifestyle
§ Science is the foundation for the planning process.

Group 7: Federalization

Definition of the Problem:
§ We are good stewards of the land and water, and the federal government seems to be our enemy. If the federal government can supercede local and state authority, then what power do we have?
§ The federal government is in violation of the Treaty of Guadalupe Hidalgo, which guaranteed us water.
§ The federal government is taking ownership of our water works, and with it the ability to farm. Laws should not result in killing communities.
§ The federal government uses "bad science" to justify its actions. There is inadequate data about the Silvery Minnow and what it needs.
§ There are many threats to our water – Mesa del Sol subdivision, BOR ownership of water works issue, environmentalist groups
§ The feds and environmentalists are joining together against us, using Endangered Species Act, and instream flow, and other mechanisms to disenfranchise us.
§ The supply of water should be the guide to development, not vice versa.
§ There is great waste of water in Elephant Butte from evaporation. It should be stored somewhere else.

Geographic Scope:

§ The problem is local, regional and national
§ The farther downstream, the harder it gets.

Who is hurt:
§ Irrigators: Their ability to make a living will be hurt, and their quality of life.
§ The aquifer and the environment: if flood irrigation stops, recharge will decrease, and desertification will increase. The climate will change with fewer trees to cool the valley.
§ The local agricultural economy: food products and alfalfa would have to be bought elsewhere, even out of state.

Who is helped:
§ BOR wants to keep their jobs.
§ Developers have easier access to land and increased population growth.
§ County government increases tax base.

Why is this important to you:
§ We live here. We have the most to lose and the least to gain.
§ The federal laws enabled us to be here, irrigating in the first place.

Group 8: Watershed Health

Definition of the Problem:
§ The watershed is in poor health, and we must be able to measure the health of the watershed.
§ The watershed should be the basis of the planning effort.
§ Federal land agencies need to be involved.
§ Wildlife, including migratory birds, are very dependent on a healthy watershed.
§ We are losing water downstream. The land-holding capacity of arroyos is diminished. Pavement increases runoff.
§ There is no attention to the Rio Grande tributaries in terms of good management of roads, grazing, timber.
§ Water quality is impacted by surface activities, including farming, underground storage tanks, landfills, etc.
§ Timber conditions and the amount of fuel in the forests and bosque is critical.

Geographic Scope:
§ Total Rio Grande Basin, including tributaries, would be preferable scope

Who is hurt:
§ Taxpayer, to pay for restoration
§ Everyone, including wildlife
§ Timber may be hurt by unrestored watersheds.

Who is helped:
§ Developers and politicians benefit from depressed land prices – easy pickings.
§ Off road vehicles benefit from an unrestored, unrestricted watershed.
§ Grazing interests may be helped by the status quo.

Why is it important:

- This is our heritage, and we want to leave it healthy for our kids and grandkids
- Land values are affected by the health of the watershed.
- We value our lifestyle.
- Watershed health is the essence of the problem.
- We don't know what the future will bring, but a healthy watershed will help us deal with it.
- We want to preserve a natural life cycle.

Potential Solutions or Actions to address the problems:

- Ideas for better water planning:
- Make the watershed the basis for planning
- Make people the basis for planning
- Develop better data by using the history and wisdom of local residents
- Include local people in planning process and data collection
- Make presentations that are clear, unbiased, and include local input
- Develop figures that accurately and fairly reflect:
    - surface drainage and internal drainage
    - domestic well usage
    - amount of water diverted and returned – actual not calculated
    - amount of evaporation
    - benefits to wildlife in irrigated fields
    - contamination sources, including urban contributions

Ideas to help agriculture survive:

- Allocate certain amount of water per sector and prohibit transfers
- Change laws so that water is tied to the land.
- Promote farmers' markets for higher value crops
- Buy develop rights to protect agriculture
- Give tax breaks to farmers
- Farmers need to unite, and find allies
- Help make agricultural more efficient:
    - quantify use
    - avoid evaporation
    - water at night
    - level fields
    - limit watering time
    - choose water-efficient crops
    - clear noxious weeds
    - use Russian Olive for firewood

Ideas for a more efficient, healthier watershed

- Manage tributary lands for the health of the watershed
- Charge Texas with the evaporation from Elephant Butte
- Store water elsewhere, not Elephant Butte
- Cities can reduce their water use
- Teach newcomers how to conserve and respect the river and all water resources

- Establish parameters for new industry based on water use, environmental impact, and employment
- Develop a vision of how we want the future to look.

Middle Rio Grande Regional Water Plan

Community Conversation:
Issues and Problems

Rio Rancho, August 22, 2000,
6:30 - 9:30 pm, City Hall

Introduction: This is an attempt to capture the ideas and the tone of the community conversation in Rio Rancho, August 22, 2000. Sponsors of the event were the Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots based organization. Mayor John Jennings of Rio Rancho opened the meeting, and Lucy Moore and Nan Nash facilitated the meeting. Brief presentations included: The Middle Rio Grande Water Budget (Lee Brown), The Regional Water Planning Process (Bob Wessely), and Implementation of the Plan (Jim Gross).

Need for increased notice of meetings: Approximately one dozen community members identified the need for more outreach to this subregion. They felt that there would have been more community members present if notice had been more thorough. Understanding the expense involved, they suggested for the next meeting a variety of ways of reaching people:

- local newspapers, hopefully with feature articles, in addition to notices
- enclosures in water bills
- television coverage, preferably with a news story, or at the very least announcements on the public access station in Rio Rancho
- announcements at related events, like city council and county commission meetings, water board meetings, etc.

Issues and Problems: The audience identified the problems and issues most critical in their subregion, and discussed each one as a group. During those conversations many potential solutions were raised to address some of the problems. Although this conversation was for the purpose of discussing problems and issues, the planning staff and volunteers were very grateful to have these solution ideas put forth, and will keep a record for future stages of the plan.

Themes Identified at the End of the Meeting: After hearing the small group reports (described below), the audience identified some themes common to many of the presentations. There was no effort to reach agreement on the themes; they were simply identified to give a picture of some of the values and concerns that underlie the Rio Rancho perspective.

- We need to learn to cooperate and get beyond competing. Our contemporary culture encourages competition; we need to develop a new culture.

- Laws and governance of water pose obstacles to comprehensive, implementable water planning.

- Balancing uses and preserving an acceptable quality of life for residents is crucial for the future health of the region.

- There is an urgency. We are in a drought, and must address serious planning now.

Issue: Role and Responsibility of the Office of the State Engineer and the Interstate Stream Commission:

Definition of the Problem: Many felt that the OSE and ISC were ill equipped to handle the task of regional water planning. There are long delays in hearings, communication problems, and inconsistent messages from the two offices concerning the acquisition of water rights and the water planning effort. There is also concern that there is no plan for resolving conflicts which will inevitably arise among the regions, as plans are developed, and that funding is inadequate for the planning effort. There was also much criticism of the "use it or lose it" principle of water rights administration in the state.

Geographic Scope: The confusion and contradiction at the two state agencies affects the entire region, and even the entire state. Subregions are pitted against each other. A participant reminded the group that the Pueblos are exempted from this state jurisdictional picture.

Who is hurt and who is helped: Those with existing water rights may benefit from the status quo. The State may benefit because it maintains control in this state of confusion.

Why it is important: Participants felt that it is crucial to have an organized, well-run state agency in order to maintain and respect the diversity in the region, and preserve the special characteristics of each subregion. A chaotic process, with conflicting priorities, will leave certain interests vulnerable.

Issue: Drought:

Definition of the Problem: Participants suggested that we may be in a drought which makes the past decades look like a wet spell. There was great concern that we are not prepared for this degree and duration of drought, and that we must begin planning, rationing, and just plain worrying about the future. There is a false sense of security.

Geographic Scope: Entire west

Who is hurt and who is helped: Those hurt will be our children and grandchildren, as the competition becomes fierce. Attorneys may benefit, as well as those who hold water rights.

Issue: Growth:

Definition of the Problem: Many felt that growth must be slowed or controlled in order to achieve a sustainability of resources. Others felt that growth is inevitable, and provides an economic future for our children. We must plan for it, they said, but not restrict it. There will need to be some reconciliation between resource limits and community values, as the population increases.

Geographic Scope: Metro areas

Who is hurt and who is helped: Those with fewer resources and less money will be hurt as competition increases. There will be some short-term economic gains, and some felt that everyone would benefit economically from growth.

Issue: How much water is really needed?

Definition of the Problem: Many felt it was important to know just how much water is needed to sustain a quality of life for this region's communities. This raised questions about how to define quality of life, or set minimal standards. There were some assumptions that we need less than we are currently using. It was pointed out that other southwestern desert cities use much less water per person than this metropolitan area. Tucson and El Paso use approximately 150 gallons per person per day, including all municipal and industrial uses. Albuquerque currently uses about 200 gallons per person per day. If there is no accurate data on the amount of water available, how can water be wisely allocated, asked a participant?

Many felt that the conservation goals were not aggressive enough, and that we need as a society to push for new technologies which could stretch water resources further into the future.

Issue: Acequias/Ditches

Definition of the Problem: Some were concerned that irrigators in the region were not conserving water to the extent possible. Water law (use it or lose it) does not provide an incentive for agriculture to conserve, and some felt that changes in the law were overdue. Others pointed out that the irrigation water is a source of non-potable water, which has a variety of uses, like recharging the shallow aquifers and supporting riparian habitat, etc.

Geographic Scope: relatively small area within the region

Who is hurt and who is helped: The river is hurt. The riparian habitat and shallow aquifers are helped.

Issue: Evaporation

Definition of the Problem: Up to one-third of the water used in region is lost to evaporation, much of it from Elephant Butte. New Mexico not only loses the water, but loses it in accounting terms to Texas. There was discussion of the logical, but painful, solution to simply pipe the river, or store large supplies underground. Although it makes sense to store all the water possible in the north, rather in the south, there are apparently legal barriers to this solution. Again, the group hoped that technology could develop some answers to the problem of evaporation.

Who is hurt and who is helped: All other potential users are hurt by the losses to evaporation. Those that are helped by the status quo are Elephant Butte businesses and recreators. It may also be cheaper to leave the system alone, rather than institute major fixes, like piping and underground storage.

Issue: The Cost of Water and Water as a Commodity

Definition of the Problem: There was general feeling that the price of water should reflect its future value, and that if the price went up, conservation would probably increase as well. There was discussion about the inequity in water costs. Some have their own wells and pay nothing; others are

hooked to the municipal system, and pay the price or else. Metering domestic wells could address some of that inequity, but it was admitted that it would be a logistical nightmare.

Geographic Scope: Inequity exists throughout the region.

Who is hurt and who is helped: Low and fixed income people are hurt the most. Agriculture may fall prey to bidding wars, and benefit in the short run, but lose in the long run. All will suffer as the price of food increases.

Issue: Attitudes about Recycling and Conservation

Definition of the Problem: There was frustration in the audience that such a small segment of the population is concerned about sustaining resources through recycling and conservation. "If they turn on the tap, and there's water, they think there's no problem," noted a participant. Some felt that part of the problem was due to the lack of good, appealing information about recycling, its importance, and some simple ways to do it. It was acknowledged that reusing water is a tricky municipal issue for at least two reasons. There can be public health issues connected with some water reuse, like gray water. And, a water provider can experience a loss in revenues if less water is used, and be forced to raise the price per unit – an unfair reward for good citizenship.

Again, there was criticism of the use it or lose it principle in state water law, and although forfeiture may have never been exercised, the threat of it seems to have a great influence on users, especially those in agricultural. There are contradictions in state water law and state water planning programs that make conservation more difficult than it should be.

Who is hurt and who is helped: All of us, especially those in the future will be hurt if we do not conserve and recycle. Traditional agricultural users may be helped by the current system which does not demand recycling and conservation.

Issue: Governance of Water/Who makes the decisions?

Definition of the Problem: Localities make many decisions about water use, but the state maintains a superior position. Decision makers and water managers are found at all levels of government: federal, state, tribal, local, acequia and water districts. All these jurisdictions need to work together in order to have a coherent, effective water plan for the future. Participants fear that the conflicts and competition within , and among, the entities will result in regional water plans which will be ignored.

Summary written by Lucy Moore. Please contact her with comments or corrections.
505-820-2166, or FAX 505-822191

Middle Rio Grande Regional Water Plan
Community Conversation on Issues and Problems
Town of Bernalillo Council Chambers
August 23, 2000

Conversation Report

I. Welcome and Introductions provided by County Commissioner Sapien and Facilitators Nan Nash and JoEllen Howarth. Approximately a dozen community members attended.

II. The Regional Water Planning Process

A. The Water Budget presented by John Shumaker
B. Water Planning presented by Bob Prendergast
C. The New Mexico Council of Government and its role presented by Jim Gross
D. Del Agua Project presented by Reid Bandeen

III. Issues/problems/concerns of those present

A. Lack of Community Input into the Regional Water Plan
B. Preexisting water rights
C. Need to educate the public about water or to get their attention another way
D. Difficulty in determining water usage in Pueblos and including that information in water planning
E. Need to look at all possible alternative resources (ex. recycled water)
F. Need to move from optimism about water and plan based upon actual resources
G. Need for consideration of long term survival of riparian areas
H. Need for water in river and the ability to support greenbelt and agriculture
I. Need for water in all surface water features
J. Concern for preservation of small scale agricultural traditions
K. Concerns about laws and regulations that promote squandering resources
L. Need for public policies that address growth
M. Need to strengthen conservation policies
N. Need to make the dam operations more efficient to reduce evaporation
O. Need for a new approach to get public attention about water and conservation, including use of recycled water
P. Concerns about water pollution and natural water quality

IV. Further Discussion about issues by whole group in an attempt to define the issue and the geographic scope of the issue, define who is hurt and who is helped by the issue and why the issue is important

A. Lack of community input into regional water plan
Define:
1. There is a disconnect between stated legal rights and supported legal rights
2. Prior legal water rights may create a disincentive for some groups to participate in regional water planning

3. The TV news media does not find this issue or the planning effort newsworthy and the group was concerned that we may need an emergency to get their attention
4. Issue D - Include input on water usage of pueblos in water planning

Geographic Scope:

4. This issue effects the entire State

Who Hurt and Who Helped:

5. The public is hurt by the lack of input but future developers and other special interests may be helped

B. Preexisting Water Rights

Define:

1. The rights are not adjudicated, quantified or defined and in fact there is a disincentive to assert preexisting water rights in some areas
2. The Conservancy District does not want the preexisting rights quantified
3. The pueblos authority needs to be recognized and respected by the Conservancy District
4. Preexisting water rights may get in the way of discussion and cooperation
5. Preexisting water rights may be a moot point when all the water is in use or may be the heart of the dispute when all the water is in use
6. Domestic wells are outside of the water rights system
7. The riparian ecosystem has not preexisting rights until an emergency
8. There are issues of downstream water rights

Geographic Scope:

9. This issue affects the entire State as the water rights are fully appropriated

Who Helped or Hurt:

10. This issue helps those with preexisting water rights if those rights are enforced, in reality developers and well diggers have priority in fact
11. Agriculture likely to be the loser

C. Need to educate the public or get their attention another way

Define**:**

1. Need to reach out to the young but must be careful of how the message is presented
2. There is a lack of connection to the ecosystem for urban children
3. Everyone needs to quantify their water use
4. Need to build awareness of appliance water use

D. Difficulty in determining water usage in Pueblos and including that information in water planning

Define:

1. This issue couples with A and the need for community input and effects other issues
2. There is a lot of uncertainty of where this will end up

E. Need to look at all possible alternative resources

Define:

1. We need to look at conservation and get into a consensus mode versus an adversarial mode

F. Need to move from optimism about water and plan based on actual resources
   1. No further discussion

G,H, I. Need to Preserve Riparian, Greenbelt, Agricultural Areas
   Define:
   1. Need to maintain some semblance of the ecosystem and historic (agricultural) use (Need for institutional control coupled with public demand to accomplish)
   2. This is a quality of life issue and we need to raise public consciousness
   3. "You don't go to the grocery store to buy a bosque"
   4. The bosque is being altered beyond recognition and the law of unintended consequences is prevailing
   5. There is a tension between esthetic and economic use
   6. Issue M the need to strengthen conservation policies through legislation couples with these issues
   7. Issue J concern about preserving small scale agricultural traditions couples with these issues

J. Preservation of small scale agricultural traditions
   1. No further discussion

K. Concerns about laws and regulations that promote squandering resources
   Define:
   1. The State is giving away domestic wells at 3 acre/feet for $5.00 with no oversight
   2. The use of lose it policies surrounding water encourage squandering

L. Need for public policies that address growth
   Define:
   1. Need legislation that encourages conservation as priority over growth
   2. Issue F addressing the need for planning based upon the actual resources fits with this issue
   3. We can't pursue a cancer philosophy but must steer our economy to flourish on constant population instead of increasing population
   4. Our resources cannot support unlimited growth

M. Need to strengthen conservation policies
   Define:
   1. See also above G,H,I.
   2. Need to consider how people have lived in the past with limited resources
   3. Need to make conservation and reuse mandatory (pricing controls)
   4. Must reuse and reduce

N. Need to make dam operations more efficient to reduce evaporation
   Define:
   1. Need to revisit the compact to reduce benefit of keeping Elephant Butte full (requires Congressional action)

2. Need to manage all reservoirs for conservation
3. Need to look over criteria for establishing releases

O. Need for a new approach to get public attention about water and conservation
Who hurt and helped:
1. Citizens helped
2. Industry and developers may not want increased attention

P. Concerns about water pollution and natural water quality
Define:
1. Need to address point and nonpoint pollution and natural water quality

V. Conversation Themes

A. While most issues have Statewide impact, we need to concentrate on Middle Rio Grande region
B. Policy makers need to be responsive. Public input need to be respected, not undercut.
C. We need to encourage conservation.
D. We need to preserve the region's historic, cultural and esthetic values.
E. We need to be careful not to kill the aquifer.
F. We need to avoid polarized decision making, plan together and conserve. All sectors, cultural, environmental and economic need to give.

VI. Conclusion - parties were encouraged to return for second part of conversation, in which goals and objections will be identified, on September 13, 2000

Middle Rio Grande Regional Water Plan

Community Conversation:
Goals and Objectives
Los Lunas, Tuesday, August 8, 2000,
6:30 - 9:30 pm, High School Cafeteria

Introduction: This is an attempt to capture the ideas and the tone of the community conversation in Los Lunas on August 8, 2000. Sponsors of the event were the Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots based organization. Commissioner Padilla of the Valencia County Commission and member of the MRGCOG Water Resources Board, , opened the meeting. Lucy Moore facilitated, with help of co-facilitators Nan Nash and Joellen Howarth. Frank Titus gave a presentation on the Water Budget prepared by the MRGCOG and the Water Assembly for the planning process. Bob Wessely of the Water Assembly described the water planning process, and Jim Gross of the MRGCOG explained various ways the water plan could be implemented.

There were questions and comments in response to the presentations concerning the role of public involvement, the representation of agriculture in the planning process, and the credibility of the MRGCOG as a body representative of rural Valencia County. Many were frustrated by "too many words" and "no action" and wondered whether this planning process was going to be worth it. Others pointed out that it is important to speak up and make your views known, or nothing will change. There was general agreement that politicians and public officials need to be present at these meetings to hear what voting water users have to say.

Lucy explained that the work done by the participants at the first meeting had been used to create six topics for discussion this evening. The hope of the planners was that the participants at this second meeting could create some goals and objectives that would guide the water planning process in a direction that would serve the people of this subregion. The MRGCOG and the Water Assembly were working together to build a water plan from the grass roots up, and these meetings are a chance for local water users to become partners with the planners to create a better plan.

The participants each chose a topic and worked on goals and objectives for that topic with the help of a volunteer facilitator/recorder. Following this, reporters for each group presented to the group as a whole. There was discussion of the goals and objectives, and other issues raised in connection with the topics. Below is a summary of the report and discussion from each small group. Although there was general agreement on much of what is said below, this in no way constitutes a consensus of the group.

1. Culture and Water

Background: At the first community conversation, several people spoke of the close connection between water and culture and quality of life. For them, a clean and sufficient water resource provides a security greater than economic. It means that a continuation of a way of life and a culture dependent on the land and its production is insured. It means that future generations are supported, and that the history, alive in stories and memories, will be honored. It means that a potential we can't even know can be protected for the future.

Goals and Objectives:

- The spirituality and the *corazon* related to water in this subregion must be valued and protected.
  - Develop an education program for students and teachers alike that will teach the values in the subregion's culture
  - Create ways of celebrating the local culture, for instance with a water festival

- Growth which will damage our culture must be controlled.
  - Moratorium on new construction based on the water budget
  - Contact legislators and politicians at all levels to reallocate funds
  - Use data for planning that reflects limited water supply

- Protect the agricultural way of life by assuring its water supply
  - Create a pool of water, or water bank, reserved for the agricultural sector

1. Agriculture and Water

Background: At the first community conversation, there was very strong sentiment that agriculture in this subregion must be protected, for the sake of the community, its culture and history, for the sake of the environment and wildlife, and for the sake of a healthy and productive region as a whole. Agriculture provides an important way of life for local families, provides products used by the region and beyond, and provides climate and habitat beneficial to the ecosystem.

Goals and Objectives:

- Restore and expand agricultural markets for local produce
  - Recruit help of NMSU experts

- Keep agricultural land in agriculture [understanding private property rights]
  - Create incentives to keep land cultivated

- Explore ways of more efficient farming [understanding the costs in terms of money, ecosystem and aesthetics]
  - bring back funding for efficient use of water

- Explore potential for crop changes

2. Water for Economic Development

Background: At the first community conversation participants identified the need for policies and regulations to govern the use of water for economic development. The subregion needs economic development, but wants to make sure that it is appropriate, in terms of environment, culture and way of life.

Goals and Objectives:

- Set standards for economic development that will protect the ecosystem and quality of life of the subregion
  - Create a vision which is ecologically sound and sustainable and which can serve as a basis for evaluating economic development decisions.
  - Work with business and industry to commit to standards
  - Work with community to educate them about the standards, through hearings and other events

- Develop policies and regulations to protect water resources
  - work with legislators and local officials to educate them about the standards and criteria for good economic development
  - only allow industry that is water efficient and does not cause unmanageable growth
  - permit only industries that are water efficient and non-polluting
  - encourage businesses that integrate or promote agriculture
  - encourage businesses and industry that provide jobs for New Mexicans
  - limit density
  - limit withdrawals from the aquifer to avoid subsidence, in this quake zone
  - limit industry that exports water in any form to other states
  - eliminate tax breaks to "unattractive" industries

- Develop eco-tourism

- Develop data on tax base needs

- Provide training for jobs in "attractive" industries

- Use existing infrastructure if meet standards; revitalize if necessary

3. Water and the Environment

Background: At the first meeting, participants expressed concern about the health of the local watershed. They were eager to protect the undeveloped land that exists, and felt that agricultural uses can be very compatible with a healthy environment. In fact, they pointed out, irrigated agriculture provides an ecosystem that can provide habitat for wildlife and birds. There were concerns about pollutants from upstream users like Albuquerque and Rio Rancho, and there was acknowledgment that farming practices have in the past contributed to contamination. A damage to the environment and water supply currently is the abundance of invader species, which choke out native plants and guzzle water. They envision a healthy, well-managed watershed in the future, realizing that there are barriers to overcome. Barriers include the power that is vested in large water consuming industries and activities, and the uncontrolled development and population explosion. They also identified as barriers to overcome a lack of an integrated vision which links us all to the natural world.

Goals and Objectives:

- Maintain a quality of river water which is safe for people and the environment
  - monitor surface and groundwater

- enforce against pollution of water resources
- contain and treat contaminated runoff

- Maximize water supply to the greatest extent possible
  - re-use, recharge, recycle industrial and municipal water
  - control and eradication of invader species [includes salt cedar, russian olive, siberian and chinese elm]
  - eliminate non-native species
  - promote the use of native species
  - line ditches where appropriate
  - build holding ponds for use by irrigation
  - use underground reservoirs for storage to eliminate loss by evaporation

- Make wise decisions concerning endangered species
  - more scientific and thorough studies of the needs of endangered species
  - consider competition between species
  - understand the impact of choices made, on humans and on the species

- Use best management practices in watershed management
  - ditch bank treatment and erosion control
  - use local expertise in combination with federal and state agency expertise
  - restore upper watersheds

- Integrate water plans of connected watersheds with plans from federal, state, local governing bodies, industry, agricultural users and environmentalists

- Restore the river's natural function

- Create informed and committed decision-makers and citizens
  - develop better figures for water use quantification [ag, municipal, domestic, industrial, waste, runoff, etc.]
  - distribute water quality monitoring data to the public
  - educate people about how regulations are developed and enforced

4. Population Pressures on Water

Background: At the first community conversation, participants identified the uncontrolled population growth in the region as a key issue for water planners to consider. They feared the population pressures spell the end of a rural, agricultural way of life and pose a serious threat to the environmental health of the watershed. Water supplies should be a factor in development decisions. Participants also pointed out that there is a prevailing assumption that growth cannot be controlled, and that one of the biggest challenges will be to combat that assumption – both among the public, and the politicians.

Goals and Objectives:

- Maximize water conservation by all users
  - make conservation a regulatory requirement

- institute a major public education program
- provide incentives
- remove disincentives [losing water rights as a result of conserving or abandonment[

- Preserve farmland
  - provide incentives, like tax abatement

- Insure responsible development that is compatible with the region and subregions
  - use sound, reliable water supply data
  - make development decisions based on good data
  - provide mechanism for rural communities to influence urban decisions
  - link growth decision to available water supply and infrastructure
  - newer development must bring water rights
  - protect domestic wells from contamination from growth

- consider birth control

- Prevent water transfers
  - tie water rights to the land
  - prevent "double-dipping" [selling, leasing water rights, and continuing to use]

- Promote the belief that growth can and must be controlled
  - educate elected officials and other decision-makers about ways of controlling growth
  - organize citizens for political action
  - call legislators at all levels to demand controls on growth that are consistent with water supplies

5. Control of Water

Background: At the first community conversation, ownership and control over water resources and water facilities was a big concern. There was the perception that state and federal government agencies were imposing themselves on local affairs, and that control was not in the hands of local water users. This was extremely upsetting to many in this subregion, particularly those in agriculture. At the second conversation, a farmer said he felt "like a football being fought over by the feds and the environmentalists. At both meetings, there was distrust of politicians, and criticism that they make decisions based on money. There was also discussion about the control of domestic wells by local government.

Goals and Objectives:

- Insure water for the compact by sending more water back to the river
  - line delivery systems in plastic or concrete, where appropriate
  - look for natural ways to reduce losses, and preserve riparian and recharge values of delivery systems

- Put the control of the river in the hands of a single authority which includes all

interests

- Return control to the local level

Summary written by Lucy Moore.

Middle Rio Grande Regional Water Plan

Community Conversation II
Goals and Objectives
Rio Rancho, Monday, September 11, 2000
6:30 to 9:00 p.m., Rio Rancho City Council Chambers

Introduction: This is an attempt to capture the ideas and the tone of the second Rio Rancho community conversation on September 11, 2000. The Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots organization co-sponsored the event. Rio Rancho Utilities Director Larry Webb opened the meeting and introduced the officials in attendance. JoEllen Howarth and Nan Nash co-facilitated the meeting, with Nan Nash providing a brief introduction and welcome. Steve Burstein of the MRGCOG gave a short presentation defining goals and objectives.

Nan then explained that the issues generated through the first Rio Rancho conversation on August 22, 2000 had been reviewed and used to create five topics for discussion. The hope of the planners was that the participants present tonight would create some goals and objectives for each topic to guide the water planning process in a direction to serve the people of this subregion. The questions included in the agenda were intended to serve as a guide for identifying goals and objectives.

The group decided to stay together and work as a group to address each subject as opposed to dividing up into subgroups. Below is a summary of the goals and objectives raised by the groups on each topic. Although there was general agreement on much of what was said below, this in no way constitutes a consensus of the group.

Water Planning Process

Background: At the first community conversation, a number of participants identified a need for greater outreach to involve the community in the water planning process. The felt that if water related events, such as the community conversation, were promoted better more citizens would become involved. They suggested a variety of ways to get more people notified and involved in the water planning process. They also stressed a need for cooperation and coordination in the planning process.

Bullets gleaned from CC#1:

* goal: find balance of uses
* reconcile conflicting uses through cooperation, not competition
* increased public participation with thorough notice, coverage, education
* should be in the context of drought planning - urgency

Additional bullets fro CC#2:

* Build coordinated efforts among agencies, including state engineers offc.
* coordinate planning with upstream and downstream regions
* balance community values within the regions

Success in forty years would look like:

* a viable community with water in the river and no disputes over water
* majority public support for the water plan
* regulations, funding and projects working in concert with the views expressed in the water plan
* all ages, including youth, have water "conscientiousness" and linkages established between educational units and employers around water
* tribes involved in the planning process
* people having the process tools to participate

Barriers include: * disparate goals and values

* public apathy
* political opposition
* speed at which events occur
* lack of water
* different levels of knowledge about water as a resource

Steps to reach success: * addressing disparate goals

* educating the public through school curriculum, including education on New Mexico water history
* focus and build upon common ground and develop guidelines for compromise
* show objective condition of aquifer and lack of regeneration to address public apathy and political opposition
* including the state in the planning process
* being objective as opposed to optimistic

Key water information needed: (needs to be publicized)

* scientific information on state of the aquifer and whether it is replenished
* political nature of decision making process
* water quality information
* hydrology

Water Governance: Laws, Regulations, and Policies

Background: At the first community conversation participants expressed frustration regarding seemingly disparate policies, priorities, goals, and practices of Federal and State agencies involved in the water planning/regulation process. Furthermore participants identified government policies which provided disincentives for conservation. Participants stressed that this issue needed addressing.

Bullets gleaned from CC #1: * capability/efficiency of OSE/ISC

* disincentives for conservation and planning
* need to reconcile conflicting plans
* decision making: local, state, federal - need for coordination

Additional bullets from CC #2: * Legislative (NM) apparent apathy, what does State want?
* need for single point of contact/ultimate authority for resolving water issues
* need to connect land use and water use planning
* need for uniform application of conservation regulations
* need to reconsider and rework some existing laws

Success in forty years would look like: * planning coupled with water availability
* equitable conservation promoted by laws and incentives, such as more water reuse and more xeriscaping
* water recognized as commodity with values balanced
* functioning water balance between the subregions
* state support for developing other sources of water

Steps to reach success: * public outcry
* water management based on rational, scientific data and method, not old case law

Barriers include: * existing compacts
* the State constitution, laws and regulations
* lack of State leadership, State engineer records, historical knowledge and adjudication
* sovereignty

Key water information needed: * tools to implement conservation
* what water rights exist and who has them

Quality of Life

Background: Much discussion at the first conversation focused on the close connection between water, culture and quality of life in New Mexico. Group sentiment favored protecting this connection and the historic water uses but questions arose in defining how much water is necessary to sustain quality of life.

Bullets gleaned from CC#1: *differences in definition
* relationship to growth
* amount of water necessary

Additional bullets from CC#2: * source and quality of water

Success in forty years would look like: * a flourishing economy with no one thirsty, diversity maintained, agreed upon water priorities, a widely accepted water plan and people happy with the water they have for the price they pay
* the look of success needs to remain flexible with steps taken to allow for future choices

Barriers include: * different values

* question of how much water is enough
* cost of resource development

Key water information needed: * public input
* how much water is necessary to maintain quality of life

Cost of Water

Background: While the cost of water to the consumer was identified as an issue at the first conversation, there was a general feeling that the price of water is not the only issue. The value of water and how water is valued were identified as issues.

Bullets from CC#1: * price to the consumer
* role in conservation
* equity issues

Additional bullets from CC #2: * costs to both direct and implied consumer (who pays for enjoyment of seeing water)
* add types of user as a subset of price to the consumer
* cost of water production
* states role in determining cost - does it include research and development
* non-monetary values such as mandated responsibilities

Success in forty years would look like:
* water viewed as valuable
* water affordable to viable community can be sustained

Steps to reach success: * a horrendous drought or water emergency
* education
* recognition of long term nature of problem
* technology and research

Barriers include: * existing interstate compacts
* public perception that water is plentiful and resistance to real cost of water
* governmental tolerance to status quo
* monetary influence on water use (water runs uphill to money)
* lack of money for resource development

Key water information needed: * recycling, xeriscaping, drip irrigation, cleaning brackish water
* information to attach value, as opposed to cost, to water; how is value determined

Water Conservation

Background: At the first community conversation water conservation was identified as an issue and a goal. Participants expressed frustration regarding the perceived public apathy towards

conservation and the governmental disincentives that perpetuate using water or losing it. The group also acknowledged that conservation may be tricky to accomplish in some situations.

Bullets from CC#1: * strategies to reduce evaporation
* agricultural efficiencies - pros and cons
* public education and awareness
* re-use strategies

Additional bullets from CC#2: * the second bullet needs to be amended to read - all sectors must share the burden of conservation
* need for incentives for conservation

Success in forty years would look like: * no increase in water usage even with population
* growth and each sector still using same % of water (except evaporation)
* quality of life maintained at a reasonable cost
* 100% using conservation strategies, i.e. using cisterns to catch rain water, etc.
* new well designed systems and infrastructure

Steps to reach success: * increase financial support and education
* share successes
* include riparian use in conservation

Barriers include: * conservation is tough to enforce
* it requires high capital and infrastructure costs
* public apathy

Key water information needed: * how much water is there and who has it and uses it
* accurate conservation information on reuse, evaporation, river/aquifer relationship and other conservation strategies and techniques

Conversation Themes: While the group did not identify specific conversation themes at the end of the second conversation, several were clear:

* A common goal of respecting and preserving the unique character of the region exists. Maintaining the unique character will be difficult given the various demands on and scarcity of water. Working together as citizens in concert with a coordinated government response is imperative to achieve this goal. Working together includes planning, developing information, educating the public and developing and implementing conservation strategies. The State must coordinate its efforts and increase its involvement in the process. Planning must look towards the long term but understand the short term emergent nature of the issue.

Middle Rio Grande Regional Water Plan

Community Conversation
Goals and Objectives
Bernalillo, Monday, September 13, 2000
6:30 to 9:00 p.m., Town of Bernalillo Council Chambers

Introduction: This is an attempt to capture the ideas and the tone of the second Bernalillo Community Conversation on September 13, 2000. The Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots organization co-sponsored the event. Mayor Aguilar and Commissioner Sapien opened the meeting and welcomed those in attendance, including Councilman Chavez. JoEllen Howarth and Nan Nash co-facilitated the meeting, with JoEllen Howarth providing a brief introduction and welcome. Steve Burstein of the MRGCOG gave a short presentation defining goals and objectives.

JoEllen welcomed the attendees and reviewed the purpose of the conversation and the agenda. Prior to beginning the conversation she noted that the issues generated through the first Bernalillo conversation on August 23, 2000 had been reviewed and used to create five topics for discussion. She expressed the hope of the planners that the participants present tonight would create some goals and objectives for each topic to guide the water planning process in a direction to serve the people of this subregion. The questions included in the agenda were intended to serve as a guide for identifying goals and objectives.

The group decided to stay together and work as a group to address each subject as opposed to dividing up into subgroups. Below is a summary of the goals and objectives raised by the groups on each topic. Although there was general agreement on much of what was said below, this in no way constitutes a consensus of the group.

Water Planning Process

Background: At the first community conversation, a number of participants identified a need for greater outreach to involve the community in the water planning process. They worried about the lack of media attention to the issue and the potential that only an emergency would get the community involved. Consensus favored collaborative community planning surrounding water issues.

Bullets gleaned from CC#1:

* maximize community input
* maximize media coverage
* inclusion of pueblo water use data
* need to plan based on reality, not optimism
* goal to balance uses, in as collaborative a way possible

Additional bullets fro CC#2:

* Bullet #4 should include resources
* maintain and respect laws in force today

Success in forty years would look like:

* water planning is public driven
* meeting our water goals without mining water or lawsuits

Steps to reach success:
* tidy up water law in New Mexico
* acquiring knowledge about water rights of municipalities and communities, surface and ground water data, and watering methods (irrigation)
* getting all the stakeholders to one table
* correlate water rights with actual water and limit growth based on water
* study watering methods
* develop respect and balance of uses - agricultural culture, way of life
* plan ahead for future generations

Barriers include:
* present over-adjudication and lack of wet water
* having courts as only enforcement mechanism
* compact issues and lack of understanding surrounding compacts
* fulfilling water rights without diminishing property rights

Key water information needed:
* efficient, effective, culturally respectful, long term sustainable use of water
* definition of beneficial use (public vs. state eng.)

Education about water

Background: Initial conversation participants identified an education issue somewhat related to the community input issue. Greater education of youth, the general public and the media was suggested as a vehicle for rasing community awareness and involvement. Education should help the young connect to the ecosystem and teach conservation need and techniques to all.

Bullets gleaned from CC #1:
* reach children
* awareness about conservation need and techniques
* connection with ecosystem
* educate media

Additional bullets:
* educate political system
* develop resources to disseminate current information but make sure the information is scientific data not scare tactics

Success in forty years would look like:
* people care
* we have a shared understanding of water facts, a better understanding of water science and a better understanding of how water laws affect the entire stretch of river

* local/regional decision making about water

Steps to reach success:

* coordinate current information sources
* perhaps use coercive tactics such as news line across TV screen which says "emergency, tomorrow your water will be shut off for one hour" to get people to thing about the reality
* continue the current conservation practices in use by Albuquerque
* get the media involved
* develop or use existing school grade appropriate curriculum about water
* make sure new citizen packets have accurate information about water

Barriers include:

* environmentalists/media disseminating false water science
* muddied water rights
* designation of "education", consider "shared understanding" etc.
* current national information on water for newcomers (suggests plenty)

Key water information needed:

* $$$
* technical data we have confidence in
* clarity about what science can tell us and courage to admit what it can't

Water Laws, Regulations, and Policies

Background: At the first community conversation much conversation centered around preexisting water rights and the need to quantify, define and respect the rights. Attention also needs to be paid to water outside of the preexisting water rights such as domestic wells as well as the actual amount of wet water. Finally any laws, regulations and policies which discourage conservation need to be addressed.

Bullets gleaned from CC #1:

* quantification and priorities of rights - pros and cons
* downstream/upstream impacts
* paper v. wet water
* disincentives for conservation: use it or lose it
* existing rights
* domestic wells
* need to address growth

Additional bullets from CC #2:

* tidy up gaps and overlaps of water regulations and laws
* honor historical water rights and learn to live with some overlap of rights

Success in forty years would look like:

* natural realities recognized while historic water rights and their basis respected
* people informed about existing laws and regulations - state, federal, tribal, historic
* local control of water

* paper water and wet water reconciled
* water regulations and laws consistent with no disincentives for conservation

Steps to reach success:

* develop policies that recognize economy/growth/water as tightly coupled system
* remove disincentives for conservation
* improve knowledge of water related conditions
* convene conversations with concise scenarios and look at implementation strategies
* use common sense
* create a public policy mechanism for pulling it all together or support existing entities in place to do this, however any mechanism/entity must be receptive to local wants and needs

Barriers include:

* current mind set regarding water rights

Key water information needed:

* technological information regarding pumping water, utilization of waste water and what has been tried elsewhere and the technology to put water where it is needed and take it from where it is not

Water Efficiencies/New Sources of Water

Background: Proper water utilization was addressed in several ways at the first conversation: conservation and educating about conservation; reducing evaporation by improving water storage; and management and reducing contamination. Participants favored research and policies around these issues.

Bullets gleaned from CC#1:

* Conservation
  - to maintain culture, sense of history, quality of life
  - historic models of conservation
  - consider mandatory, through pricing, etc.
  - re-use and reduce
  - education
* Evaporation Reduction
  - dam operations
  - compact provisions
  - reservoir management
  - review criteria for releases
* Reduce water contamination
  - point and nonpoint pollution
  - natural water quality

Additional bullets from CC#2:

* tittle should be changed because there are no new sources

Success in forty years would look like:

* no need for meetings
* 90% of population recognizes need to conserve
* UNM, Journal Center, Airport, etc. xeriscaped
* golf courses use grey water
* agriculture uses conservation techniques (laser leveling, drip irrigation) but still exists in community
* reservoir operations managed differently
* equilibrium between water use and resource

Steps to reach success:

* manage reservoirs using conservation strategies
* use coercion and subsidies to increase conservation
* long term planning
* maintain local control and respect "old-timers" wisdom

Barriers include:

* human nature
* denial
* lack of data on usage and supply
* waiting on data instead of using common sense

Key water information needed:

* information about usage, availability, conservation techniques and about when do we have enough information

Preservation of Agricultural, Riparian, and Greenbelt Areas

Background: Like other sub-regions, the Bernalillo conversation participants strongly favored preserving the historic face of their region. Preserving agricultural and riparian areas was viewed as a quality of life issue. Participants stressed the need to raise public consciousness about the need to preserve the unique character of the area to keep economic pressure and apathy from allowing the region to be altered beyond recognition.

Bullets from CC#1:

* maintain traditional look
* quality of life
* uniqueness of bosque
* role of legislation
* protect small scale agriculture

Additional bullets from CC #2:

* define -what is a greenbelt? (using public money to buy green areas?) (linked region open space - MRGCOG)

Success in forty years would look like:

* preservation and balance
* small scale farms and agricultural cooperatives
* land recognized as important in our philosophical vision

Steps to reach success:

* assess the cost of subdividing land to the person subdividing
* preserve historic, cultural farming techniques
* develop/show visual models of what different land use scenarios would look like to create incentives
* determine how much we are willing to spend to maintain
* develop land trust
* understand why we value agriculture
* subsidize agriculture so that those who want to farm, can

Barriers include:

* economic including pressure to chop farm into housing lots
* lack of understanding where food comes from

Key water information needed:

* impermanence of the bosque
* how much it will cost to conserve
* is there enough water to support more growth

Conversation Themes: The overriding goal of preserving current balance of the region dominated much of the conversation. Participants stressed respecting the historic water rights and uses and cited the need for conservation to preserve the region's character. Most supported maintaining local control and expressed concern regarding laws, regulations and entities which serve as a barrier to this goal and are often inconsistent. Yet most recognized the need to work within the context of existing water law. Developing more technical information regarding water availability, usage, and conservation and disseminating the information in meaningful ways was important to the group, although some expressed that we have plenty of water information presently. Several commented on the limitations of science and urged respect of those limitations. Conversation participants clearly supported conservation by generally accepted current methods and by other methods developed in the future. Perceived public apathy resulted in some consensus that coercive conservation methods will be necessary. Others felt that removing disincentives and providing other incentives, as well as informing the public would improve conservation.

Summary of Community Conversations # 1 and # 2

Lucy Moore

Facilitator's note: During July, August and September 2000, the Middle Rio Grande Water Planning Region hosted two series of "community conversations" in four locations within the region. These conversations served several purposes. First, they offered community members and interest groups in the subregions important information about the water planning process and the complex water picture in the middle Rio Grande valley. Second, they engaged citizens in the water planning process in a way that was open and inclusive. Participants were taken seriously and given the chance to work in a constructive way with government – a contrast to the "behind closed doors" decision-making that offends citizens who take their role seriously. Finally, those who attended contributed substantively to the evolution of the regional water plan. They identified problems and issues in their subregions, and developed those concerns into goals and objectives. This work product, which is summarized below, will guide the next steps in the planning process.

Hosts of the community conversations were the Middle Rio Grande Council of Governments and the Water Assembly, the two entities responsible for creating the water plan for this region. MRGCOG and the Assembly chose to contract with facilitator Lucy Moore to help with the design, facilitation and summarizing of these first two series, the regional forum to be held November 4, and the third series of community conversations to be held in November. Lucy was joined by three Albuquerque area facilitators, Victoria Garcia, Joellen Howarth, and Nan Nash. The four were responsible for facilitating the conversations and producing a summary of each event which was mailed to all those who attended, as well as writing the summary of the first two conversations.

The intent is to use the wealth of ideas and guidance offered during the first two conversations to create a foundation for the discussion at the regional forum, November 4, at the Convention Center in Albuquerque. There, participants representing the four subregions, as well as the Jemez Springs and Cuba areas, will come together to compare priorities for water planning, and explore the potential for consensus on goals and objectives. Inevitably there will be conflicts and inconsistencies as the subregions express themselves. The goal will not be to force agreement on a region so complex and diverse as this one, but to clarify values and priorities and leave with a better understanding – and hopefully some acceptance – of our differences. In addition, organizers expect that participants will be surprised at the amount of common ground and shared goals among the subregions.

What follows is a summary of the issues and problems, and the goals and objectives, raised during the first two community conversations in Los Lunas, Rio Rancho, Bernalillo, and Albuquerque. The summary is intended to highlight the similarities and the differences between

subregions, and to underscore areas of focus for the regional water plan.

Themes Raised at Community Conversations #1 and #2

At the end of each of the first four community conversations the group was asked if they could identify any themes from the evening's discussion – themes which might cut across interest or sector lines, and which might characterize the thinking of that subregion. Following is the list of themes, loosely organized by topic, with meeting location indicated in the right column.
(LL = Los Lunas; B = Bernalillo; RR = Rio Rancho; A = Albuquerque)

Planning and Politics

Communities should have a central role in water planning.	LL
Citizens are also experts, and should be seen as having some answers.	LL
Citizens who participate in the planning process need to be treated with respect.	B
Politics should not guide water planning	LL
Laws and governance of water pose obstacles to comprehensive, implementable planning	RR

Water is precious .... and getting more so

This is an urgent situation – we are in a drought	RR
We need to encourage conservation	B
We need to protect the aquifer	B
Water is undervalued and overused	A
The amount of available water should determine the amount and kind of growth.	LL
Water is absolutely limited – unless you have money, or unless you are very creative.	A
Water in the region should stay in the region.	LL

History and culture play a role in water planning

History provides important data and wisdom for planning today.	LL
We need to preserve the region's historic, cultural and aesthetic values	B

Role of agriculture

There is value in agriculture, to the environment, the culture, the economy	LL
Farmers and environmentalists have a lot in common, including love of nature, and common enemies.	LL
Farmers feel under attack	LL

We need to find a balance

We're all in this together	A
Water uses need to be balanced, and competition reduced	LL
need to avoid polarized decision-making	B
all sectors (cultural, environmental, economic) need to give	B
need to learn to cooperate and get beyond competing	RR
· we must balance uses and preserve acceptable quality of life for future health of the region	RR

Community Conversations on Issues and Problems

LOS LUNAS: Those at the first Los Lunas Community Conversation identified eight key issues in achieving a secure water future for their subregion. Listed below, the issues focused on the difficult position of the subregion with respect to the larger region.

Population Growth requires immediate action which government will not address
Survival of Agriculture
Historical Perspective
How to develop solutions to water problems given population growth
Banning High Water-consumptive industry
Unsound Science
Federalization
Watershed Health

Concerns about the Future: Participants expressed fear about the future of an agricultural and rural way of life, and frustration over the seeming lack of understanding and support in other parts of the region. Farming and other rural activities benefit the region as a whole in many ways, including providing wildlife habitat, conserving open space, maintaining valuable cultural traditions, and putting food on urban tables. They struggled with the reality of differing opinions and values with neighboring urban subregions, and the threat they feel from entities with money and power. They see themselves as vulnerable to uncontrolled growth, and fear they will be overrun by urban sprawl. The supply of water should be the measure of new development.

In addition, the subregion is currently under enormous pressure from the Endangered Species Act, and the needs of the Silvery Minnow. Local farmers resent the ability of the federal government and perhaps the courts to make demands on them in terms of water deliveries which will endanger their own ability to survive. At the same time, they emphasized the need for balance within the region, and searched for ways to satisfy the conflicting needs of rural and urban, industrial and environmental in the planning process.

Participants spoke about conservation, and identified ways that agriculture could be more efficient. They also discussed economic development, and the need for appropriate, water-wise industry or businesses in the area.

This community was skeptical about the ability of government at any level to resolve difficult problems successfully and fairly. They pointed to duplication, inconsistencies, political agendas, and apathy among both leaders and citizens alike.

Concerns about the Water Planning Process: This subregion felt strongly that there is expertise of all kinds at the community level which must be central to the water planning process. A sound plan should include history of each subregion, including anecdotes, local wisdom, cultural resources, and memories of the past condition of the river. Participants were also concerned that the data used in developing the alternatives in the water plan must be credible and its presentation unbiased. The watershed should be the basis of the planning effort, because the health of the watershed is the key to the quality of life for its inhabitants – human and non-human.

LOS LUNAS GOALS: At the second community conversation, participants elaborated goals which were derived from the issues identified above. These goals were:

Protect Water Uses which Preserve Our Culture

- Develop cultural values education program for students and teachers
- Create ways of celebrating local culture, like water festival
- Control growth which will damage our culture
- Assure water supply for agricultural

Preserve Agricultural Uses of Water

- Restore and expand agricultural markets for local produce
- Create incentives to keep land cultivated
- Explore ways of more efficient farming
- Explore potential for crop changes

Promote Appropriate Economic Development (in terms of culture, environment, water use)

- Set standards for economic development based on a common vision
- Develop policies and regulations to protect water resources
- Permit only industries that are water efficient and non-polluting
- Develop eco-tourism
- Develop data on tax base needs
- Provide job training in "attractive" industries

Restore and Maintain a Healthy Watershed

- Maintain river quality which protects people and the environment
- Maximize water supply to the greatest extent possible, through re-use, recharge, etc.
- Restore the river's natural function
- Use best management practices in watershed management

- Integrate water plans of connected watersheds with federal, state, local, and sector plans
- Create informed and committed decision-makers and citizens
- Develop credible quantity data

Control Growth to Maximize Water Resources
- Maximize water conservation by all users
- Preserve farmland

- Insure responsible development compatible with the region and subregions
- Make decisions based on good data and available water supply and infrastructure
- Consider birth control
- Prevent water transfers
- Promote the belief that growth can and must be controlled

Promote Community Control of Water Resources
- Insure meeting compact requirements
- Return control to the local level
- Put the control in the hands of a single authority which includes all interests

RIO RANCHO: Those at the first Rio Rancho Community Conversation identified nine key issues in achieving a secure water future for their subregion. Listed below, the issues focused on the urgency of the need for water planning, given the drought conditions.

Role and Responsibility of the Office of the State Engineer/Interstate Stream Commission
Drought
Growth
How much water is really needed?
Acequias/Ditches
Evaporation
Water as a commodity and the cost of water
Attitudes about recycling and conservation
Governance of water

Concerns about the Future: Those at the Rio Rancho meeting believe that the drought is here, and the need for planning is urgent. They are concerned about how to balance the need to conserve water and the desire for a certain level of quality of life. They see conservation opportunities in agriculture and in evaporation reduction, as well as daily consumption. Changes in attitude about recycling and re-using water will be key to effecting a change. Pricing of water must be equitable, and at the same time discourage waste. Participants noted that control of water resources happens at all levels of government, from community to federal, and that all jurisdictions need to be cooperative and coordinated.

Concerns with the Water Planning Process: Many participants are worried about the inevitable conflicts within, and between, regions, and the capacity of the Interstate Stream Commission to reconcile those conflicts. They also saw serious inconsistencies between the water rights arm of the state (Office of the State Engineer) and the water planning effort (ISC). There were specific concerns about the notification efforts for this regional water planning process.

RIO RANCHO GOALS: At the second community conversation, participants elaborated goals which were derived from the issues identified above. These goals were:

Insure Fullest Possible Public Participation in Water Planning Process

- Institute comprehensive notification, coverage, education about water planning
- Emphasize urgency of drought situation

Coordinate Planning with Other Planning Efforts

- Communicate, coordinate with upstream and downstream regions
- Encourage coordination among state, federal, tribal, local entities

Balance Values and Balance Uses with the Region

- Seek cooperative, not competitive, solutions
- Address disparate goals and focus on common ground
- Show a realistic, not optimistic, picture

Coordinate Governance of Water

- Connect land use and water planning
- Review and revise laws
- Consider single point/ultimate authority for resolving water issues
- Coordinate decision-making
- Reconcile conflicting water plans

Maintain Quality of Life for Residents

- Protect historic and culturally important water uses
- Develop mutually agreed upon definition of quality of life and water requirement
- Preserve ability to make future choices

Make Decisions about Water based on its Value

- Price water equitably
- Price water to protect the resource
- Manage water to reflect variety of values of water

Promote Water Conservation for all Sectors

- Develop strategies to reduce evaporation

· Initiate public education and awareness programs
· Develop credible data base of water supply and uses, including evaporation

BERNALILLO: Those at the first Bernalillo Community Conversation identified eight key issues in achieving a secure water future for their subregion. Listed below, the issues focused on the need for conservation, education, and the dilemma of planning without quantified rights.

Need for community input in the planning process
Plan should be based on water facts, not optimism
Need for public awareness and education to combat apathy
Pre-existing water rights
Need to include Pueblo data and needs in plan
Need for water in the river and healthy riparian areas
Preservation of small scale agriculture
Changes in the law and policies
Need for conservation
Water quality

Concerns about the Future: Participants in Bernalillo were concerned that without quantification of pre-existing water rights, and without an accurate count of domestic well usage, it will be impossible to produce a credible water plan. The group also hoped that the future would bring a wet river to the subregion, with enough water to support green belts and healthy bosques, and that small scale agriculture will survive. Conservation should be the rule, not the exception, and government should provide incentives, not disincentives to conserve, recycle and re-use water. Reservoirs should be managed to reduce evaporation. The group hoped that growth could be controlled, and that planning would be based on the actual supply of resources. There was also concern about both point and nonpoint source pollution in the subregion's water supply. Those in Bernalillo felt the key to resolving many of the water issues is education of both adults and children, about the ecosystem and its needs, about the need for conservation, and about specific ways of conserving.

Concerns about the Water Planning Process: Participants were concerned that there was not adequate community input in the planning process. Causes may include apathy, ignorance of the problem, or reluctance to enter a planning process for fear it will affect, or be affected by, the legal status of unadjudicated water rights. The group also cited lack of media coverage, and suggested that an emergency might spark their interest.

BERNALILLO GOALS: At the second community conversation, participants elaborated goals which were derived from the issues identified above. These goals were:

Create an Inclusive, Collaborative Water Planning Process
· Maximize community input

- Maximize media coverage
- Base plan on reality, not optimism
- Develop a process for balancing uses and resources, collaboratively
- Maintain and respect current laws

Develop a Water Education Program for Adults and Children
- Engage, and educate, media to inform public
- Educate politicians
- Develop education program based on scientific data, not scare tactics

Review and Revise Water Laws, Regulations, and Policies
- Address pre-existing water rights
- Clarify the discrepancies between paper water rights and wet water
- Replace disincentives to conserve with incentives
- Address domestic well issues
- Address gaps and overlaps in laws
- Address growth
- Gather data about re-use, distribution, and experiences elsewhere

Promote Water Efficiencies to Maximize Water Supply
- Develop public education program
- Improve water storage to reduce evaporation
- Reduce contamination
- Provide links between conservation and cultural preservation
- Review, revise price structures for water

Preserve Agricultural, Riparian, and Greenbelt Areas
- Raise public consciousness about the unique character and culture of the subregion
- Protect and promote small-scale agriculture and traditional farming techniques
- Develop land trusts

ALBUQUERQUE: Those at the first Albuquerque Community Conversation identified six key issues in achieving a secure water future for their subregion. Listed below, the issues focused on the needs of the river, the potential threats of residential developments, and the key role of prior rights.

The importance of not limiting choices in the future
The dilemma of prior rights
The future of irrigated agriculture
Residential development and landscaping
Aquifer recharge and the needs of the river
The Campbell Ranch development

Concerns about the Future: Those in Albuquerque were concerned about immediate threats to a reliable water supply and quality of life, like uncontrolled development, pollution, and the loss of irrigated agriculture. They were also concerned with long term issues, including the need to balance uses in a way that recognizes prior existing rights and historical and cultural values of water. Some felt it was important not to limit, by our actions today, the choices that future generations can make. The group was concerned that the watershed and the river be maintained for a healthy ecosystem, and considered the aquifer to be part of that ecosystem. Conservation is key to a long term water supply, and evaporation and waste of all kinds need to be reduced to the greatest extent possible.

Education, awareness and changing public attitudes will be important in protecting and maintaining the water supply for the future. Laws and policies need to be changed to provide incentives, rather than disincentives, in the building industry, for instance. Residential development needs to include a wide array of conservation measures, in the building, the furnishing, and the maintenance of the homes. Understanding the complexity of the economic picture, a participant pointed out that we are implicated in development – we are all hurt and we all benefit.

Participants also discussed the issue of prior rights – Pueblo rights, Land Grant rights, Conservancy District rights, and endangered species rights – and their impact on the water future in the region. Clearly it is important to understand the nature of the rights, and hopefully, they said, there are ways to resolve conflicts over water use without going to court.

ALBUQUERQUE GOALS: At the second community conversation, participants elaborated goals which were derived from the issues identified above. These goals were:

Insure Water for the River

- Manage the resource to maximize water supply
- Acquire open space and flood plain for public and habitat use
- Coordinate community restoration projects
- Develop a comprehensive approach through coordination of relevant government and private entities
- Create a political will to implement the vision
- Develop comprehensive education program and incentives to shift public attitude

Address Legal Issues to Improve Water Management

- Finish water adjudications
- Change laws as necessary to encourage or mandate conservation in all sectors
- Promote collaboration of all interests to resolve water disputes
- Establish a separate water planning agency at the state level
- Establish enforcement mechanisms for regional water plans

· Develop a mutually supported data base of water rights and supply and use

Preserve Irrigated Agriculture

· Support local agricultural products
· Change tax structures to encourage farming
· Establish community and school gardens
· Change development patterns
· Create an "e-grange" – electronic support organization for farmers
· Change laws to prevent separating water from land

Manage Residential Develop to Protect Water Resources

· Build new attitudes about lifestyle, to encourage cluster, dense housing patterns
· Develop user-friendly information on development alternatives
· Develop consensus among water users on appropriate policies
· Change laws, ordinances, policies to promote conservation, infill, realistic impact fees
· Create improved transportation system to support clusters
· Insure access to open space and parks

Maximize Conservation of Water Resources

· Change building codes to mandate water-saving measures
· Change water laws to provide incentives to conserve
· Create public education campaign to promote conservation
· Mandate that local government set a good example
· Track water use of each sector

Create an Educated Public about Water Issues

· Create a public and political groundswell for education on water issues
· Strive for consensus on the water picture and the limits of supply with unbiased data
· Secure a major funding commitment
· Create a garden for every school

Middle Rio Grande Regional Water Plan

Community Conversation III
Review and Discuss Preliminary Alternatives
Rio Rancho, Thursday, November 9, 2000
6:30 - 9:00 pm, Town of Rio Rancho Council Chambers

Introduction and Purpose of the Meeting: This Community Conversation was the third in a series intended to include community participation in the water planning process for the Middle Rio Grande region. This third conversation in Rio Rancho followed the Regional Water Forum, held on November 4, 2000, which brought together citizens from throughout the region to review and refine the goals and objectives developed during the first two conversations. In preparation for the third community conversations, planning staff and citizen volunteers synthesized the input to date into a Primary Listing of Water Management Alternatives, and added a List of Criteria for evaluating the alternatives. The purpose of this meeting was for the public to review these two lists and comment.

The Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer, grassroots organizaiton co-sponsored the event. Lucy Moore and Victoria Garcia co-faciliated the conversation.

Background: Water Assembly members offered a short introduction regarding the water planning process. They described the various studies which formed the foundation for the Water Budget, and the materials available for the public.

General Concerns: During the evening, participants asked questions and make comments concerning cross-cutting issues for water planning:

- How much water do we really need? The Water Budget indicated that we are just breaking even now; a growing population, thirsty neighbors, and water consumptive lifestyles will tip the balance.

- What is the horizon for water planning? Many felt that 40 years is very short-sighted and that the planning exercise should look much farther into the future.

- How can we meet these goals by consensus? Given the different and conflicting agendas, it will be very challenging to achieve goals using alternatives supported by everyone.

- We need to make difficult choices about water management now, while it is not yet a real emergency. There is a status quo alternative, in which we would continue to mine groundwater and eventually have no choices left.

- We need to build a political will – at the leadership and the citizen levels – to create a vision and work toward it. This vision would say that water is a privilege, not an entitlement, and that we all have a responsibility to our communities and to the future.

Discussion of Preliminary Alternatives: Frank Robinson of the Water Assembly led the discussion of Alternatives. He emphasized the draft nature of the alternatives and encouraged people to speak up and suggest changes. The alternatives, he explained, are an attempt to place the regional goals and objectives into categories which could form the basis for potential policies and actions in the future. The Alternatives, he said, are based on a "water saved or gained" criterion and therefore reflect a general recognition that water in the region is a scarce resource and the general consensus that an overreaching goal of the Regional Water Plan is to preserve the region's water. He urged the public to consider each category for its representativeness of the goals and objectives, and to determine whether or not additional alternatives are needed. Participants discussed the alternatives using a handout and overheads.

Category 1: Urban Water Management: Rio Rancho participants noted that alternatives 1 through 5 would result in demand reduction, and alternatives 6 and 7 would increase supply. They also noted that providing institutional incentives and subsidies for conservation, re-use and recycling (#2) could prove very expensive. There was support for ordinances to control water use in new communities, requiring xeriscaping, etc.

Category 2: Agricultural Water Use: Some pointed out that ditch lining or piping water (#2) could reduce valuable recharge into the aquifer in some areas – recharge, in fact, which farmers do not get credit for. Agricultural conservation may require tax credits, and other assistance to farmers to make the changes economically feasible.

Category 3: Regional Watershed/Basin Management: A participant noted that these alternatives are "formidable" and wondered whether or not the public would be willing to support them. Removing non-native vegetation that consume large amounts of water, like Salt Cedar, is an expensive task, and maybe a futile one. There were stories about the resilience of the species, and the impossibility of ridding it from an area permanently. There were also questions about the potential impacts, if any, on the weather and climate cycles, if riparian areas are restored and evapotranspiring vegetation is significantly reduced.

Category 4: River/Bosque Management: There was support for reducing evaporation at reservoirs, since that is such a large consumer of water. Narrowing channels and improving the low flow conveyance channels below San Acacia (#3) might increase flows, but there could be unwanted environmental consequences, like the loss of quiet pools for minnows and the elimination of riparian areas.

Category 5: Water Supply Enhancement: There was interest – and skepticism – about seeding clouds.

Additional Alternative: Participants asked that "Growth Management to Reduce Demand" be added as an alternative. They felt that this was an inevitability, and that although it is a politically controversial subject, it is important to grapple with the growth issue – both as a result of births and in-migration. There is a group of consumers, who have a stake in this water plan, but who are "not here yet," they explained.

Discussion of Criteria for Detailed Analysis (of Alternatives): Frank Robinson explaied the development of the Criteria and led the discussion. The criteria provide a tool to be applied to each water management alternative to assist in their evaluation. Frank reminded the participants thatthe purpose of the current conversation was to evaluate whether the proposed criteria, and the questions suggested for applying that criteria, were sufficient and complete for evaluating the alternatives.

Criterion 1: Technical Feasibility: The group supported these criteria as stated, but felt that more emphasis should be placed on the length of time it would take to implement a particular alternative.

Criterion 2: Political Feasibility: Many were firm in their belief that rally public support (#1) is the key to a successful water strategy. Asking citizens if an alternative is acceptable is not enough; changes should be required, and citizens expected to get used to it – like seat belt laws.

An additional question under 1. Local Support was suggested: Is it possible to rally public support?

Criterion 3: Social and Cultural Impacts: Equity was a key word in this discussion. Who benefits, and who gives up how much summarizes the balance that must be struck. There were questions about definitions – "quality of life," for instance, is a relative term, with very individual meanings. Somehow, it must be possible to maintain a quality of life (different as those lives may be) and equitably apportion the restrictions. Perhaps a paradigm shift can occur so that people think in terms of "community" instead of in terms of "I." Some suggested that the law of primacy, and domestic well laws, would need to be changed as well. A participant suggested that it will be necessary to re-educate people for them to see things differently, value aesthetics, for instance.

The group suggested adding an additional question under 4. Equity: Who is going to bear the cost?

Criterion 4: Financial Feasibility: For this category there were two additional criteria:

3 Life Cycle Analysis: Participants suggested measuring the costs, actual and symbolic, of an action to third parties, even non-water related interests, including downstream interests, environmental impacts, and energy impacts.

4 Water as a commodity: Participants suggested that water is cheaper than it ought to be, and that the true costs of water treatment be understood and paid for.

Criterion 5: Implementation Schedule: Here, a participant suggested that there may be a shortage of land before there is a shortage of water because of the high number of federally owned acres in the region. Sandoval County, for instance, is only 20% privately owned. Land planning and water availability should be closely connected, according to many.

Criterion 6: Physical, Hydrological and Environmental Impacts: Again, the farming community noted that they are not given credit for the recharge from acequias.

An additional criterion: Intuition: A participant suggested that there be a criterion for evaluation that asks "Does this alternative feel right/good?" In other words, does it make sense at an emotional and values-based level?

Summary written by Lucy Moore. Please contact her with any comments or corrections.
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Middle Rio Grande Regional Water Plan

Community Conversation III
Review and Discuss Preliminary Alternatives
Los Lunas, Tuesday, November 14, 2000
6:30 to 8:30 p.m., Los Lunas High School

Introduction and Purpose of Meeting: This Community Conversation was the third conversation in the conversation series intended to capture community input into the Middle Rio Grande Regional Water Plan. This third conversation followed the Regional Water Forum, held on November 4, 2000, which brought together citizens from the entire region to review and refine the goals and objectives developed in each subregion through each subregions' first two Community Conversations. In preparation for Community Conversation III, the previous input was synthesized into a Primary Listing of Water Management Alternatives. Additionally criteria for analyzing the alternatives in a detailed manner was drafted. The purpose of the Conversation III was to first review the proposed Water Management Alternatives to confirm that they accurately represented the subregions input and additionally to review the proposed analysis criteria to determine whether it provided a good plan for analyzing the different alternatives.

The Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots organization co-sponsored the event. Victoria Garcia and Nan Nash co-facilitated the conversation with Victoria Garcia providing a brief introduction and welcome. A small group of local citizens, many of who had attended at least one of the prior Conversations, participated in Conversation III. As with Conversation I and Conversation II, the participants engaged in a thoughtful and detailed conversation about the evenings topics.

Background: Bob Wessely, of the Water Assembly, provided a short introduction regarding the water planning process. He discussed the various studies that provided the water budget information we currently have and the various steps towards developing a regional water plan.

Discussion of Preliminary Alternatives: Frank Robinson, of the Water Assembly, introduced and lead the conversation about the Preliminary Listing of Water Management Alternatives ("Alternatives"). He explained that the Alternatives were an attempt to place the regional goals and objectives for water management into some sort of representative categories and that the goal of the discussion was to brainstorm about the categories. He emphasized that at this time the participants were not evaluating the categories, rather reviewing whether the categories represented the subregion's alternatives and whether additional alternatives or alternative subpoints were needed. A copy of the Preliminary Listing of Water Management Alternatives, attached hereto, was distributed to all participants. The Alternatives are based on a "water saved or gained" criterion and therefore reflect a general recognition that water in the region is a scare resource and the general consensus that an overreaching goal of the Regional Water Plan is to preserve the regions water.

The first alternative discussed was Urban Water Management. Frank explained the alternative subpoints identified in prior conversations. Los Lunas Conversation III participants added the following:

Initially participants felt that Domestic Water Management might be a better alternative heading that Urban Water Management. Much discussion focused on the need for educating the urban public. Education on water conservation and about the historical impact of water on population was specified. Notably some historic populations were devastated in periods of extreme drought. Some participants felt that limiting growth may need to be considered under this alternative. At the very least we need to plan for economic and population growth taking water into account. Finally xeriscaping needs to be specified when the alternative subpoints address landscaping.

The second alternative discussed was Agricultural Water Use. Frank explained the alternative subpoints identified in prior conversations. This alternative generated a lot of conversation which was greatly aided by the farmers participating in the conversation. Los Lunas Conversation III participants added the following:

Participants generally agreed that improving efficiency of cropland irrigation was important but cautioned that we must look carefully as tradeoffs, such as loss of aquifer recharge and the inherent problems with some of the proposed methods. Things that sound good such as drip irrigation may not work well for the large scale farmer. Nevertheless there are efficiencies that can apply to farming such as more efficient of water delivery for flood irrigation, laser leveling, and concreting ditches. These efficiencies are quite expensive and subsidies for conservation needs to be better. The restrictions on Department of Agriculture cost share also need to be reduced. We also need to look at how to chose what ditches would be concreted and be mindful of the aquifer recharge loss due to this. We also need to work with smaller farmers, educating them and encouraging conservation. Most large scale farmers have their plots laser leveled but many smaller scale farmers do not. If this is a cost issue, then subsidies should be considered.

One participant suggested that we need to place value on agriculture land for the aquifer recharge it provides the region and additionally for the open space link it provides to urban areas. The group felt it was extremely important farmers not be pitted against urban users on water savings. This point echoed the concern expressed by this subregion in prior conversations that if subgroups are pitted against one another, the farmers will suffer. Participants again stressed that most farmers already conserve water to the extent financially feasible but that certain improvements are extremely expensive and need to be subsidized.

The third alternative discussed was Regional Watershed/Basin Management. Frank explained the alternative subpoints identified in prior conversations. Los Lunas Conversation III participants added the following:

Initially the participants had questions about the watershed basin and suggested that it needed to be defined. It was agreed that watershed health is critical to the amount of water you can get from an area and therefore needs to be analyzed, addressed, and managed. Therefore maintaining watershed health needs to be a criterion and it was suggested that a study be undertaken to determine the way to maintain optimum watershed health. We also need to tend to the top of the watersheds. Additionally participants felt that the subpoint dealing with restoring native vegetation was critical. They also suggested requiring water retention dams on new construction sites.

The fourth alternative discussed was River/Bosque Management. Frank explained the alternative subpoints identified in prior conversations. Los Lunas Conversation III participants added the following:

The participants generally agreed with this alternative and the criterion but noted that we also need to pay attention to water an Bosque quality, specifically trash in the Bosque. Additionally we need to consider species preservation as well as water conservation.

The fifth alternative discussed was Water Supply Enhancement. Frank explained the alternative subpoints identified in prior conversations. Bernalillo Conversation III participants added the following:

Once again the participants focused on watershed health when discussing this alternative. Specific suggestions for improving watershed health included reducing the number of septic tanks and dealing with trash in the county. Notably water quality also impacts crops. Questions arose about water harvesting and the possibility of getting the harvested water back into the aquifer. One participant noted that rainwater can be harvested by collecting it from the roof and from using birms to direct rain. Another suggestion for enhancing the water supply was to treat non-potable water to make it potable. Finally focusing on the spirituality of water was raised.

In summary the participants generally agreed that with some tweaking the alternatives and criterion were representative of the regions concerns and additionally included the concerns of their subregion. Overriding concerns for preserving watershed health came up a number of times. Similarly the goal of maintaining the agricultural way of life was important and the related goal of urbanites and farmers both sharing the weight of conservation without one side shouldering a disproportional burden.

Discussion of Criteria for Detailed Analysis of Alternatives: Frank Robinson explained the development of the Criteria for Detailed Analysis and lead the discussion regarding the criteria. The criteria provide a tool to be applied to each water management alternative to assist in evaluating the different methods suggested for achieving that alternative. Frank reminded the participants that the purpose of the current conversation was to evaluate whether the proposed criteria, and the questions suggested for applying that criteria, were sufficient and complete criteria for evaluating the alternatives.

Participants agreed with the criteria suggested for analyzing **Technical Feasibility** and had little to add.

Political Feasibility was the second criteria discussed. Once again the issue of education was raised. The media needs to be educated. Additionally the politicians need to be educated so that they plan for the long term. Under the criteria of local public support we also need to ask whether there is legislative support and whether the legislative support is broad based. Finally the question of coalescing management as a way of dealing with inter-agency conflict arose.

In addressing **Social and Cultural Impacts** the theme of education again arose as did the issue of water spirituality. It was noted that Indian water rights need to have a place and input when we speak of Social and Cultural Impacts. The quality of life impact criterion needs to also consider recreational use. Participants appreciated that this criterion recognized that water is a social and cultural issue as well as a physical system issue.

The **Financial Feasibility** criteria was the next criteria addressed by the group. Participants felt that the question of whose cost and whose benefit, public or private needed to be addressed when addressing Cost/benefit. Furthermore implicit as well as explicit costs needs to be analyzed. The analysis needs to look at long term costs for a liveable future. Finally we should probably ask whether there is a way to mitigate the costs.

The group had few comments regarding the **Implementation Schedule** criteria. The analysis does need to consider the long term impacts and effects.

The last criteria discussed was the **Physical, Hydrological and Environmental Impacts** criterion. The participants felt that we need to focus on keeping water in our system as opposed to saving water. Additionally under Watershed/Geologic Impact we need to asked how the saved water will be used.

Closing Comments: At this point in the conversation the participants were asked if they have any additional comments. The participants appeared satisfied with the points raised during the conversation. The participants were then provided comment sheets to send additional input, informed about both upcoming meetings and other related meetings and thanked for their excellent input.

Middle Rio Grande Regional Water Plan

Community Conversation III
Review and Discuss Preliminary Alternatives
Bernalillo, Wednesday, November 15, 2000
6:30 to 8:30 p.m., Town of Bernalillo Council Chambers

Introduction and Purpose of Meeting: This Community Conversation was the third conversation in the conversation series intended to capture community input into the Middle Rio Grande Regional Water Plan. This third conversation followed the Regional Water Forum, held on November 4, 2000, which brought together citizens from the entire region to review and refine the goals and objectives developed in each subregion through each subregions' first two Community Conversations. In preparation for Community Conversation III, the previous input was synthesized into a Primary Listing of Water Management Alternatives. Additionally criteria for analyzing the alternatives in a detailed manner was drafted. The purpose of the Conversation III was to first review the proposed Water Management Alternatives to confirm that they accurately represented the subregions input and additionally to review the proposed analysis criteria to determine whether it provided a good plan for analyzing the different alternatives.

The Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots organization co-sponsored the event. Commissioner Sapien opened the conversation and welcomed those in attendance. JoEllen Howarth and Nan Nash co-facilitated the conversation with Nan Nash providing a brief introduction and welcome. A small group of local citizens, many of who had attended at least one of the prior Conversations, participated in Conversations III. As with Conversation I and Conversation II, the participants engaged in a thoughtful and detailed conversation about the evenings topics.

Background: Bob Wessely, of the Water Assembly, provided a short introduction regarding the water planning process. He discussed the various studies that provided the water budget information we currently have and the various steps towards developing a regional water plan. He also explained the information materials available at the conversation.

Discussion of Preliminary Alternatives: Frank Robinson, of the Water Assembly, introduced and lead the conversation about the Preliminary Listing of Water Management Alternatives ("Alternatives"). He explained that the Alternatives were an attempt to place the regional goals and objectives for water management into some sort of representative categories and that the goal of the discussion was to brainstorm about the categories. He emphasized that at this time the participants were not evaluating the categories, rather reviewing whether the categories represented the subregion's alternatives and whether additional alternatives or alternative subpoints were needed. A copy of the Preliminary Listing of Water Management Alternatives, attached hereto, was distributed to all participants. The Alternatives are based on a "water saved or gained" criterion and therefore reflect a general recognition that water in the region is a scare resource and the general consensus that an overreaching goal of the Regional Water Plan is to

preserve the regions water.

The first alternative discussed was Urban Water Management. Frank explained the alternative subpoints identified in prior conversations. Bernalillo Conversation III participants added the following:

Some discussion focused on whether institutional incentives and pricing would be enough to manage use or whether regulation would ultimately be necessary. Social pressure was also mentioned as an incentive and the idea that businesses could be recognized for conservation by some sort of a placard was suggested. If water use was regulated, fines for violations could be used to fund some of the more expensive water conservation programs. Finally the idea of educating schoolchildren on both how to save water and the cost of water was discussed.

The second alternative discussed was Agricultural Water Use. Frank explained the alternative subpoints identified in prior conversations and highlighted some education provided by the Los Lunas Conversation III participants the prior evening. Bernalillo Conversation III participants added the following:

Initially the necessity of involving acequia organizations in the planning process was discussed. It was pointed out that trust and rapport needs to be built with these organizations in order for them to feel comfortable participating. Furthermore the traditional and cultural aspects of the acequia communities need to be acknowledged and respected.

The Conservancy District also needs to play a role in improving water management. The Conservancy District could provide instrumentation to farmers and improve the way water is delivered and used through the system. The issue of drip irrigation versus field flooding needs to be explored and this includes studying water "conditioning" for farms to condition water so that it could be used in a drip system on a large scale. Additionally farmers need to be provided incentives for water conservation.

Finally we need to distinguish between the causes and the symptoms of water issues.

The third alternative discussed was Regional Watershed/Basin Management. Frank explained the alternative subpoints identified in prior conversations. Bernalillo Conversation III participants added the following:

Participants felt that several additional areas needed to be explored when looking at watershed and basin management. These include grazing practices and land use in particular watersheds, such a dumps and tailings. We also need to look very carefully at the side effects of managing the river. Finally we need to understand that enhancing storm water infiltration in natural drainage courses and basins (subpoint #1) could be costly and could destroy the ecology.

Additional discussion focused on bringing all users into the conversation, especially the

pueblos and how to get other groups involved.

The fourth alternative discussed was River/Bosque Management. Frank explained the alternative subpoints identified in prior conversations. Bernalillo Conversation III participants added the following:

Alternative #4 generated some discussion about trade offs. It was recognized that while some subpoints look attractive, such as removing non native plants such as the salt ceder, these actions will have an impact, such as destroying habitat of species that may be endangered, so there is much to consider in our decisions.

The fifth alternative discussed was Water Supply Enhancement. Frank explained the alternative subpoints identified in prior conversations and emphasized the need to brainstorm at this time without concern to cost or feasibility. Bernalillo Conversation III participants added the following:

Initially, in response to weather modification (subpoint #2), one participant queried whether the region has enough moisture and evaporation for cloud seeding to be a possibility. Water banking, water marketing, and land retirement during droughts were suggested as additional methods to enhance our water supply. Building a pipeline from the Gulf of Mexico and desalinizing the water was suggested as one possibility for importing water.

Discussion of Criteria for Detailed Analysis of Alternatives: Frank Robinson explained the development of the Criteria for Detailed Analysis and lead the discussion regarding the criteria. The criteria provide a tool to be applied to each water management alternative to assist in evaluating the different methods suggested for achieving that alternative. Frank reminded the participants that the purpose of the current conversation was to evaluate whether the proposed criteria, and the questions suggested for applying that criteria, were sufficient and complete criteria for evaluating the alternatives.

Technical Feasibility was the first identified criteria discussed. The participants were satisfied with the suggested screening for availability, reliability and applicability. They did not have any additional suggestions for this category.

Political Feasibility was the second identified criteria discussed. The participants agreed that local support, legal considerations and inter-agency conflict were important measurement parameters but added several others. Region/Subregion agreement will effect political feasibility. If our region pursues an alternative with other regions in the State or other neighboring states oppose it? Similarly the support of the Pueblos and tribal governments needs to be assessed as a factor. Finally the impact of political coalitions should be considered.

The participants felt that public opposition needs to be reviewed as separate from local support. It was recognized that support is often a much more passive response than opposition. Additionally this criteria needs to account for the fear factor through education. Public support

needs to be connected to political action.

Social and Cultural Impacts were the third criteria discussed. General discussion and agreement focused on the issue of mutual accommodation and respect for one another. The participants acknowledged that it is important for us to be on the same water team.

Financial Feasibility was the fourth criteria discussed. Additional financial factors which should be considered are the availability of matching funds for projects, the visibility of funds and the competition with funds for other social needs. We also need to consider the number of people benefitted not simply the cost when applying this criteria. This consideration could also apply to the equity category of the social and cultural impacts criteria. We should think about reciprocal (mutually beneficial) solutions when applying this criteria.

Implementation Schedule was the fifth criteria discussed and the participants suggested that manageability but considered when applying this criteria.

Physical, Hydrological, Environmental Impacts was the sixth and last criteria discussed. Frank explained that this is a large category of criteria and that hydrological maybe should be hydro geological. Questions arose about the term "water logging" and Frank explained that from his understanding this term refers to land become saturated with water as the result of reservoir. The participants felt that water logging should be amended to define in the criteria factors what it meant. Some attention should also be given determining how we quantify or weight the different factors. Finally the desired location should be considered under this criteria.

Closing Comments: At this point in the discussion, the tired participants were asked to take one more look at the Water Management Alternatives and the Criteria and see if they had any closing comments. After reviewing the criteria one participant commented that while the idea of applying the different criteria was a good one, we can't get so locked into the criteria that we overlook or rule out good ideas. The other participants agreed that this was an excellent point and the idea of a miscellaneous criteria was suggested.

The participants expressed some concern about the lack of participation in this general issue and the question of how to get the word out was discussed. The fear is that people will oppose any water conservation plan and claim they had no input. It was suggested that spreading the word through Chambers of Commerce, the Rotary, and other small business associations as well as through talk shows. We should also look at models from other states regarding implementation of water plans.

In closing the participants were provided comment sheets to send additional input, informed about both upcoming meetings and other related meetings and thanked for their excellent input.

Middle Rio Grande Regional Water Plan

Community Conversation III
Review and Discuss Preliminary Alternatives
Albuquerque, Monday, November 20, 2000
6:30 to 8:30 p.m., Indian Pueblo Cultural Center

Introduction and Purpose of Meeting: This Community Conversation was the third conversation in the conversation series intended to capture community input into the Middle Rio Grande Regional Water Plan. This third conversation followed the Regional Water Forum, held on November 4, 2000, which brought together citizens from the entire region to review and refine the goals and objectives developed in each subregion through each subregions' first two Community Conversations. In preparation for Community Conversation III, the previous input was synthesized into a Primary Listing of Water Management Alternatives. Additionally criteria for analyzing the alternatives in a detailed manner was drafted. The purpose of the Conversation III was to first review the proposed Water Management Alternatives to confirm that they accurately represented the subregions input and additionally to review the proposed analysis criteria to determine whether it provided a good plan for analyzing the different alternatives.

The Middle Rio Grande Council of Governments (MRGCOG) and the Water Assembly, a non-profit, volunteer driven, grassroots organization co-sponsored the event. JoEllen Howarth providing a brief introduction and welcome and Nan Nash facilitated the conversation. A small group of local citizens, many of who had attended at least one of the prior Conversations, participated in Conversations III. As with Conversation I and Conversation II, the participants engaged in a thoughtful and detailed conversation about the evenings topics.

Background: Bob Wessely, of the Water Assembly, provided a short introduction regarding the water planning process. He discussed the various studies that provided the water budget information we currently have and the various steps towards developing a regional water plan. He also explained the information materials available at the conversation.

Discussion of Preliminary Alternatives: Mary Murnane, of the Water Assembly, introduced and lead the conversation about the Preliminary Listing of Water Management Alternatives ("Alternatives"). She explained that the Alternatives were an attempt to place the regional goals and objectives for water management into some sort of representative categories and that the goal of the discussion was to brainstorm about the categories. A copy of the Preliminary Listing of Water Management Alternatives, attached hereto, was distributed to all participants. Initially some discussion focused on the on the term "alternatives." Several participants felt this term was confusing. They questioned the overall goal and after some discussion regarding the communities input into defining the overall goal or goals, indicated that as opposed to Preliminary Water Management Alternatives the list should be called Preliminary Water

Management Goals or Objectives.[1]

The first alternative discussed was Urban Water Management. Mary explained the alternative subpoints identified in prior conversations. Albuquerque Conversation III participants added the following:

The participants expressed strong conservation sentiments during the discussion. They felt that we need to address domestic well use specifically and monitor well use, probably through metering. They expressed a need to limit growth or at least regulate development to manage growth. They voiced concerns that because we do not pay the real price of water, waste is encouraged and stated that we need to pay the real price of water, not $.93 for 748 gallons. One participant did note that business and residence are not chosen by water price in this state. They suggested an absolute water use cap for the community. Finally they noted the need for educating the public and offered the example of alerting water users during critical water shortage periods, such as PNM or Santa Fe does.

Technically the participants suggested that the terms "institutional" and "incentives" be defined in #2 and furthermore that #2 should be directed at rehabilitation to save energy. Additionally they suggested that #5 should read "Charge for water regardless of residential, commercial or industrial use" and that the term "Charge" would mean charge the real cost of water.

The second alternative discussed was Agricultural Water Use. Mary explained the alternative subpoints identified in prior conversations. Albuquerque Conversation III participants added the following:

The participants focused on the alternative subpoints during this discussion. They felt that it would be very difficult to covert to low water consumptive crops (#3) because water does not guide crop decisions, other factors, such as bank financing, do. They perceived assistance to conserve (#4) as very important because there are no other incentives for farmers to conserve as presently their water is free. They suggested a fifth subpoint of as addressing the use or lose regulations/policies currently in place.

The third alternative discussed was Regional Watershed/Basin Management. Mary explained the alternative subpoints identified in prior conversations. Albuquerque Conversation III participants added the following:

This alternative generated a lot of discussion. The participants were concerned that all of the subpoints were controversial and questionable and that we need to be very sensitive to the effects and side effects of each. Furthermore we need to address the heat island effect. One

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[1] For the purpose of this report the groupings will continue to be listed as alternatives.

suggestion was to begin each subpoint with the word "judiciously." They felt that subpoint #3 needed further definition regarding where the vegetation removal would occur. Another suggested that subpoint #3 is really a subset of subpoint #2. Someone suggested that #5, management that includes controlled burns and other potential methods, be added. Finally one participant proposed that only subpoint #4 made any sense and that subpoint #4 subsumed the other three subpoints, but another felt that it was important to retain improving the watershed and that included fire management.

The fourth alternative discussed was River/Bosque Management. Mary explained the alternative subpoints identified in prior conversations. Albuquerque Conversation III participants added the following:

Initially the participants pointed out the Alternatives C & D could be combined as they both deal with watershed management. Wee need to be careful not to just look at evapotranspiration as bad. It is part of the water balance. How to maintain the native species that are reintroduced, such as overbank flooding, needs to be addressed under this alternative.

The fifth alternative discussed was Water Supply Enhancement. Mary explained the alternative subpoints identified in prior conversations. Albuquerque Conversation III participants added the following:

Basically the participants rejected weather modification. The expense and questionable results of cloud seeding was discussed. One participant then suggested that alternatives A, B, & C be collapsed into one alternative because they all deal with water supply enhancement.

In reflecting on the Preliminary List of Alternatives, the group suggested that a couple of alternatives (categories) needed to be added. One would be **Political Action - national and international**. Subpoints would include addressing the compacts, public policy actions and steering the economy to depend less on growth and development. Another would be **"The Living River"** and would address river water use as separate from human water use. Currently all the alternatives focus on human water use. Initially the issue of the living river came up when addressing River/Bosque Management, but ultimately participants concluded a separate category was necessary.

Generally the participants stressed the additional themes of general and overall water quality and educating the public regarding the use of water. These themes need to run throughout the alternatives.

Discussion of Criteria for Detailed Analysis of Alternatives: Mary Murnane explained the development of the Criteria for Detailed Analysis and lead the discussion regarding the criteria. The criteria provide a tool to be applied to each water management alternative to assist in evaluating the different methods suggested for achieving that alternative. Mary reminded the participants that the purpose of the current conversation was to evaluate whether the proposed criteria, and the questions suggested for applying that criteria, were sufficient and complete

criteria for evaluating the alternatives.

Technical Feasibility was the first identified criteria discussed. The participants were satisfied with the suggested screening for availability, reliability and applicability. They did not have any additional suggestions for this category.

Political Feasibility was the second identified criteria discussed. The participants talked some about local support and one suggested broad public support (a), coupled with established positions in the public sector (b) and a responsible agency (d), negates the need for management agency support (c). Another participant commented that agency management may be national as opposed to local and it may be useful to consider agency management as a potential barrier.

A participant pointed out that political feasibility in a practical sense is how to get local government to make hard choices. This is hard to evaluate and therefore lack of local political (elected official) support should not necessarily sink an excellent alternative. Another stated that the criteria needs to consider the distribution of faction attitudes that make up the public as opposed to viewing the public as monolithic.

Social and Cultural Impacts were the third criteria discussed. A participant pointed out that there was some value judgements inherent in the criterion should be posed in value neutral terms. Specifically the term "change" should be substituted for the term "disruption." We need to consider the effect of change itself and recognize that some people will not like the changes. Criterion C(3)(a) should read "net benefit to economic base" and #3 needs to allow for the dynamics and resiliency in the economic base.

Financial Feasibility was the fourth criteria discussed. Under Cost/Benefit we need to speak of both in either singular or plural. We also need to assess costs under the other criteria. Finally this criteria could be especially useful in prioritizing alternatives, with lo cost, hi benefit alternatives tackled first.

Implementation Schedule was the fifth criteria discussed and the participants felt that this criterion perhaps should be a Stage II feasibility assessed, so that after feasibility is evaluated under the other criterion, then the question of feasibility could be considered.

Physical, Hydrological, Environmental Impacts was the sixth and last criteria discussed. When applying these criteria, evaluators need to consider sustainability and long term viability in ever category, perhaps asking the question "Does it work in perpetuity?". Technical change which would improve the criterion include: changing F(2)(b) to read "Does the change in water quality pose a public health or other environment risk?" and then deleting F(2)(c); changing F(3)(a) to read "Is there a desirable or undesirable impact to affected ecosystems?"; and changing F(3)(b) to include the words "sensitive, rare or threatened" before species.

Closing Comments: Because our time for using the IPCC was expired there was little time for closing discussion. Bob Wessely provided some brief information about upcoming meetings. The participants were provided comment sheets to send additional comments and thanked for their excellent input and the conversation was adjourned.

Historical Archive G-3

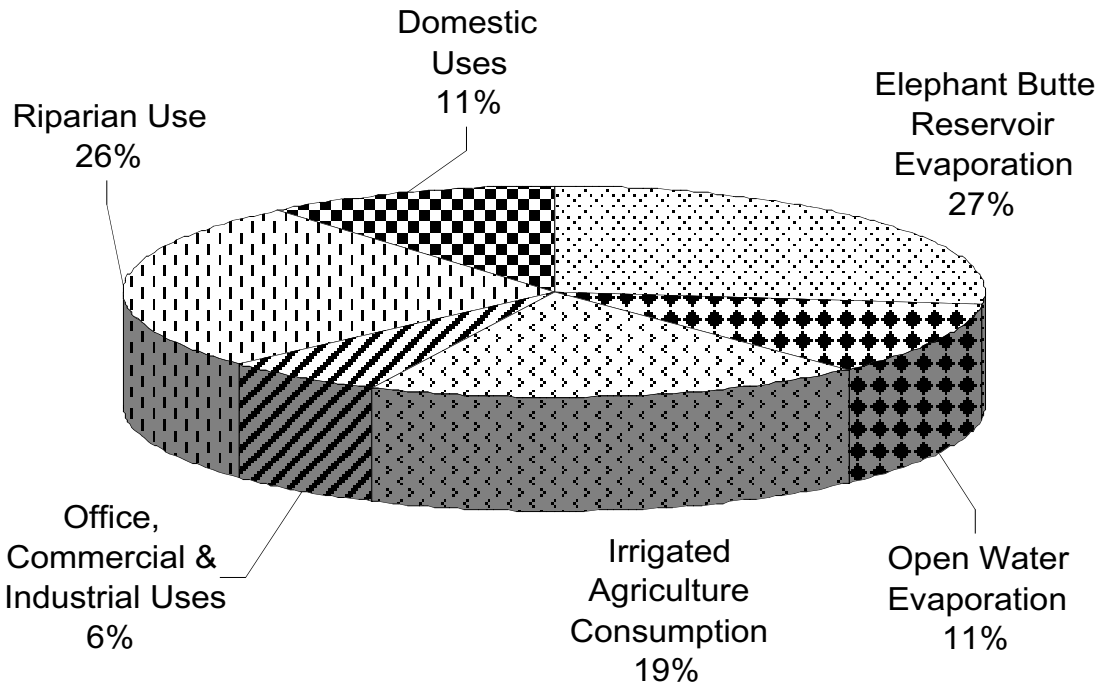
Community Conversation 4

HOW WILL WE SHARE THE WATER?

Please Attend

COMMUNITY CONVERSATIONS ON REGIONAL WATER PLANNING

Today's Water Use Picture =



= 70,000 acre feet average deficit per year

Source: *Middle Rio Grande Water Budget – Averages for 1972-1997*, October 1999

Tomorrow's Water Use Picture = ?

Middle Rio Grande Water Assembly

Our Mission = Balance Water Use with Renewable Supply

- *Current demands on our water resources exceed the renewable supply*
- *An unsustainable present day shortage faces more growth in demand*
- *How should we share this critical resource?*
- *Which uses can we modify*?

Broad public decision-making is needed to achieve this mission

We Must Budget Our Limited Water For A Healthy Future

We dare you to balance the water budget !

Please join us for a **community conversation** on how to share the water and to try your hand at balancing the water budget. An interactive computer model of the water budget will be available to illustrate the complexity of the problem.

Albuquerque, Rio Rancho, Los Lunas – 6:30 to 9:00 pm

March 4	Bernalillo County: Indian Pueblo Cultural Center, 2401 12th St. NW, Albuquerque
March 6	Sandoval County: Rio Rancho City Council Chambers, 3900 Southern Blvd. SE, Rio Rancho
March 12	Valencia County: Fred Luna Senior Center, 315 Don Pasquale, Los Lunas

For more information call Bob Wessely at 867-3889 or MRGCOG at 247-1750

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*Also, please mark your calendar for the **Annual Assembly** on **April 6, 2002** at the UNM Anthropology Hall. More information will be forthcoming.*

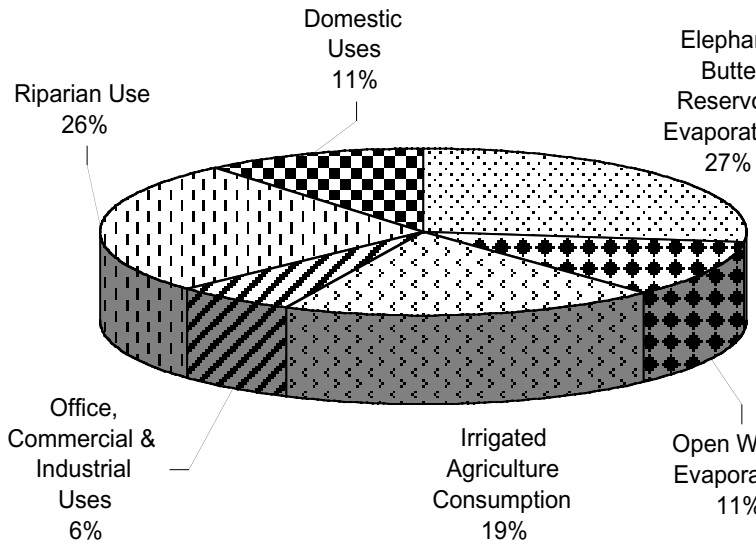
These conversations benefit from support of the UNM Utton Center and Sandia National Labs. The Water Assembly is working in partnership with the Middle Rio Grande Council of Governments to develop a regional water plan.

MIDDLE RIO GRANDE WATER ASSEMBLY
Post Office Box 25862
Albuquerque, NM 87125-5862

COMMUNITY CONVERSATIONS ON REGIONAL WATER PLANNING

Albuquerque, Rio Rancho, Los Lunas
March 4, 6, & 12, 2002

Today's Water Use Picture =



= 55,000 acre feet average deficit per year

Source: *Middle Rio Grande Water Budget – Averages for 1972-1997*, October 1999

Tomorrow's Water Use Picture = ?

* *Current demands exceed the renewable supply*
* *An unsustainable present shortage faces increase in demand*
* *How should we share this critical resource?*
* *Which uses can we modify?*

Regional Water Plan's Mission = Balance Water Use with Renewable Supply

HOW WILL WE SHARE THE WATER?

Community Conversation Agenda

6:30 Welcome

Purpose of Meeting and Background on Regional Water Planning

* Planning process
* Components of the regional water plan
* Factual information, including supply and demand
* Overview of Mission and Goals, & Overview of Alternatives

7:00 What We Are Going to Do Tonight

* Introduce Sandia Team
* Purpose of break-out groups

7:10 Computer Simulation of Water Balancing Exercise

* Introduction to Water Balancing Exercise
* Introduction to modeling and exhibition of model

7:30 Break-out Groups

* Conduct modeling exercise from different perspectives
* List numbers & assumptions insights & issues, advice & evaluations

8:30 Report Back & Wrap-up

9:00 SEE YOU AT THE **APRIL 6TH ANNUAL ASSEMBLY** AT THE **UNM ANTHROPOLOGY HALL**!

Hosts for these conversations are the **Middle Rio Grande Water Assembly** & **Middle Rio Grande Council of Governments**, which are working in partnership to develop a regional water plan. Facilitated by Lucy Moore, these conversations also benefit from support of the Interstate Stream Commission and Sandia National Labs.

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Available Information & Products

(unless otherwise noted, soon to be found on www.WaterAssembly.org)

Summary Information

* Information Summary Sheet
* Questions & Answers
* A Water Plan for the MRG
* Background Information
* Introduction to the Water Budget

Products in Progress

* Water Plan Annotated Table of Contents - (www.WaterAssembly.org/regpln01.html)
* Draft Alternative Actions Data Base & Water Management Alternative list
* Interim Mission and Goals

Completed Products & Relevant Information

* *Water Budget* - contact MRGCOG at 247-1750
* Water Assembly brochure - contact MRGCOG at 247-1750
* Map of Planning Region - (www.WaterAssembly.org/mrgmap.gif)
* *Attitudes and Preferences of Residents of the Middle Rio Grande Water Planning Region Regarding Water Issues* (2000) - (www.waterassembly.org/jbrownrp.html)
* *Historical And Current Water Use In The Middle Rio Grande Region* (June 2000), John Shomaker & Associates, Inc. & Pioneerwest - (www.mrgcog.org/shoemaker.pdf)
* *Future Water Use Projections for the Middle Rio Grande Water Planning Region* (September 2001) - (www.mrgcog.org/wtrbd/FWUR%20_final%20draft_.pdf)
* *Middle Rio Grande Water Supply Study* (August 4, 2000), S.S. Papadopulos & Associates, Inc. - (www.seo.state.nm.us/water-info/mrgwss/mrgwss-final-rpt.pdf), (www.sspa.com/ashu/rio/start.htm), *Illustrated Summary of Water Budget Data* - (www.sspa.com/ashu/rio/index2.htm)
* *Analysis of paleo-climate and climate-forcing information for New Mexico and implications for modeling in the Middle Rio Grande Water Supply Study* - (www.sspa.com/ashu/rio/New_Mexico_climate-memo.pdf)
* Regional Water Planning in New Mexico (www.seo.state.nm.us/doing-business/water-plan/rwpnm-pamphlet.html)
* Regional Water Planning Handbook (www.seo.state.nm.us/doing-business/water-plan/rwp-handbook.html)
* *Focus 2050 Plan* (2000), MRGCOG - (www.mrgcog.org/2050.pdf)
* Middle Rio Grande Regional Water Planning Program - Memorandum Of Understanding for cooperation in Regional Water Planning (1998) - (www.mrgcog.org/wtrmou.html)
* Resolution to Establishing A Middle Rio Grande Water Resources Board (MRGCOG R-98-5) - (www.mrgcog.org/wtresolution,html.htm)

please note that many of these items can also be obtained, some for cost, at MRGCOG.

Community Conversation
"Balancing the Water Budget"
Albuquerque
March 4, 2002

Facilitator/Recorder: Lucy Moore

Background: Three Community Conversations were held in March 2002 for the purpose of updating citizens on the progress of the regional water planning effort and giving them a chance to work with the "Water Balancing Exercise," developed as a tool to help citizens understand the challenges of meeting future water demands. The Middle Rio Grande Water Assembly and The Middle Rio Grande Council of Governments are working in partnership to develop a regional water plan. These Community Conversations were also supported by the UNM Utton Center (providing support for facilitation) and the Sandia National Labs (providing development of the water balancing exercise).

Each Community Conversation included presentations on the water planning process, a demonstration of the exercise tool, and a chance for participants to work with the computer model in small groups. What follows is the summary of the small group work, and general concerns raised by participants about the planning and the modeling processes, at the March 4 meeting at the Pueblo Cultural Center in Albuquerque

Group 1: Balancing for the Future:

General Comments:

- Conversation must include costs of water (social and economic) and cultural values, including aesthetics and quality of life issues
- Water is both a commodity and a base component of life

Comments about the model:

- add use of reclaimed water
- add metering
- add boundaries/constraints – scientific, legal minimums, etc.

Savings	Source	Comments
15% (area)	Elephant Butte	consider change in location – TX, CO, aquifer store more at Abiquiu technological fixes – surfactants, freezing, covers recreation impacts impacts of decreased evap on rainfall take Compact measurements elsewhere change Compact reduce surface area – berms, deepen, etc.
30% (ET)	Riparian	reduce salt cedar, other non-natives and underbrush need scientific evidence to support removal choices

		maintain biodiversity and balance
		Endangered species issues
		need river management, ie. flood for cottonwoods
Open water		
20% (ET)	Agriculture	leave acreage same, conserve ET with cons.methods
		future of retired farmland?
		impact of crop type on water consumption
		social/historic values of crops (alfalfa)
		laser level fields
		costs of efficiencies to small farmers – incentives
		metering
10%	Socorro/Sierra	
25%	Residential	mandate consumptive savings of 25%
		water rates comparatively low
		legislate conservation measures, low flo, etc.
		meter wells
		change mindsets, education
		change outdoor watering practices
	Business/Government	

Group 2: Balancing the Future:

General Comments:

- Can we capture stormwater inflows?
- Are the averages from wet years? Will this be misleading as we enter dry years?
- What impacts do markets have on water transfers?

Comments on the Exercise:

Savings	Source	Comments
	Elephant Butte	storage options important
		need to understand compact restrictions, maybe revisit
15%(ET)	Riparian	leave the acreage as is
		remove exotics, replace with natives
25% (use)	Agriculture	implement efficiencies
		improve gaging and monitoring
		assume 11% acreage reduction
20%	Socorro/Sierra	same as assumptions for agriculture
	Open water	little support for any change

25%	Residential	use pricing mechanisms use education and incentives drop to 0.06
25%	Business/Govt.	scrutinize type of water used by new industry don't balance on the "backs of jobs" drop to 0.07

Group 3: Balancing the Future:
General Comments:

- How are the City's water supply, use and sewage return flow figured into the modeling process?
- Validity, consistency of inflow numbers
- Meaning of "imports from Socorro and Sierra Counties"
- Compact requirements – is it a percentage? is it an actual amount? what are the restrictions on Elephant Butte management? is there an "escape clause"?
- Could we increase the inflow to Elephant Butte by reducing vegetation, P-J upstream?
- Can we buy water rights from other states?

Comments about the exercise: Group 3 wished the exercise could show the total effects of changes to the system. For instance, what are the impacts to recreation, environment, economy from making changes in the pool size or depth at Elephant Butte? "Tell us what the valley would really look like with all the changes we made in the exercise."

Some felt the model was too simple, and that a very small change in the numbers reflects an unrealistically dramatic change in the in the exercise.

Some in Group 3 felt there was too much print, and too small, in the exercise. Others felt it was easy to understand and deal with.

Savings	Source	Comments
20%	Elephant Butte	explore upstream storage potential for building dams upstream – in the Rio Grande Gorge, or even in Colorado potential for holding water downstream, ie Caballo compact restrictions – what is extent? explore technologies to reduce evaporation
25% (ET)	Riparian	can we eradicate non-native species? how?
20% (?)	Agricultural	using drip irrigation and different crops concern: what is realistic amount of reduction? concern: danger of losing water rights if not used idea: bank water saved by acequias (for acequias)
10%	Socorro/Sierra	not want to have to buy water rights from them
10%	Open water	concrete line deep ditches, or deepest part of ditches
25%	Residential	
25%	Business/Government	

Group 4: Balancing for the Future:

General Comments:

- balancing is more difficult than it seems – diversity of opinions
- hard to leave out legal issues
- good to begin the dialogue
- must all work together – probably need to mediate at some point

Comments about the model:

- need better, credible numbers in the exercise
- confusion over wording of Elephant Butte storage
- determine breakdown ditches and rivers in open water category

Savings	Source	Comments
	Elephant Butte	highest potential gain, most difficult to change
		potential to change timing of water delivery
		potential to change geometry of lake
	Riparian	expand flood plain, remove levees
		remove salt cedar
	Open water	determine breakdown between ditches and rivers
		consider alternatives to open ditches – 800 miles
	Agriculture	change crops, institute drip irrigation
		decrease acreage, leave ET rate
		need to include evaporative losses in conveyances
	Socorro/Sierra	determine uses of water
	Residential	need to breakdown outdoor and indoor uses
		compare with other cities
	Business/Government	

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Summary prepared by Lucy Moore. Please contact her with comments or corrections.
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Community Conversation
"Balancing the Water Budget"
Rio Rancho
March 6, 2002

Facilitator/Recorder: Lucy Moore

Background: Three Community Conversations were held in March 2002 for the purpose of updating citizens on the progress of the regional water planning effort and giving them a chance to work with the "Water Balancing Exercise," developed as a tool to help citizens understand the challenges of meeting future water demands. The Middle Rio Grande Water Assembly and The Middle Rio Grande Council of Governments are working in partnership to develop a regional water plan. These Community Conversations were also supported by the UNM Utton Center (providing support for facilitation) and the Sandia National Labs (providing development of the water balancing exercise).

Each Community Conversation included presentations on the water planning process, a demonstration of the exercise tool, and a chance for participants to work with the computer model in small groups. What follows is the March 6 Rio Rancho summary of the small group work, and general concerns raised by participants about the planning and the modeling processes.

General Concerns:

Missing Factors: There was concern that a prolonged drought was not included in the water balancing exercise. Nor does it include a way of factoring in the costs associated with the changes in water use and management. There is an element of social engineering included in the assumptions about population; participants wondered about the challenge of controlling population.

Money: Participants agreed that there is a money factor tied to all solutions, and that perhaps water rates should reflect the true cost of water.

Potential Common Ground: Many hoped that the region could avoid the water wars that plague other parts of the country.

Group 1: Balancing for the Future:

General Comments:

- Impact of changes – consider benefits of evaporation, detriment of evaporation reduction; consider impacts on recreation, quality of life; consider impacts to downstream users

Comments about the model:

- Cost-benefit links needed, to show real life impacts

Savings	Source	Comments
	Elephant Butte	store upstream, or in aquifer
		consider surfactants, freezing, etc.
		Compact issues

		consider benefits of evaporation
		value of consistent lake level
		dredge to deepen
		change allocation of evaporation to MRG
		redefine "storage" – below the dam
		reduce evap to 8 af
		reduce surface area by 50%
25%	Riparian	Santa Ana project a model
		maintenance and political costs
		Bosque ownership issues
		ESA needs – including SW Willow Flycatcher
		value of maintaining diversity
	Open water	use best technology to reduce evap to 4.5
		reduction Elephant Butte will increase open water
	Agriculture	reduce acres to 34k
		reduce ET thru efficiency
		drip, crop choices, laser leveling, cleaning ditches
		impact of economics on retiring farmland
10%	Socorro/Sierra	water rights moving to MRG region now
15%	Residential	reuse v. return to river
		higher density, smaller lots, less yard
15%	Business/Government	

Group 2: Balancing the Future:

General Comments:

- premise for the exercise – whether to base decisions on what you think will happen, or what you hope will happen?
- complexity of impacts of solutions on each other, or on other areas – storing water upstream
- look at other basins for examples of models – Columbia, for instance
- need to know total groundwater reserve
- need to know net savings from enclosing ditches – should it be counted as savings in acreage or evaporation rate?

Comments on the Exercise: This group felt they needed more information and more details. They also suggested that the model include constraints, so that it is impossible to take the slider to zero if there are technical or legal constraints to doing so.

Savings	Source	Comments
	Elephant Butte	consider re-negotiating Compact
		reduce area to 14,500 acres
		reduce evap rate to 8
		make reservoir narrower and deeper
	Riparian	keep area same – reduced already enough
		reduce ET from 3 to 2.5, thru exotics removal
25%	Agriculture	decrease ET from 2.1 to 1.56
15%	Socorro/Sierra	decrease from 100k to 85k
15%	Open water	decrease area from 12k to 9.5 k
15%	Residential	decrease usage from 0.08 to 0.07
		consider difference in ages of buildings – Rio Rancho v. Alb
25%	Business/Govt.	decrease consumption 0.096 to 0.07

Group 3: Balancing the Future:

General Comments:

- source of the numbers; why did the deficit go from 70K to 55K?
- what is the minimum required in Elephant Butte?

Comments about the exercise: Slider should constrain limits to reflect legal constraint on Elephant Butte, ie. not possible to take it to zero. Break down the tributaries and the groundwater recharge; could have impact on watershed restoration goals. It was difficult to have some values in gallons, and others in acre feet.

Savings	Source	Comments
	Elephant Butte	move storage upstream, or underground
		reduce surface by 60%
	Riparian	reduce ET/acre to 2.5
		reduce acres to 40k; remove phreatophytes
		costs? – $ 600/acre
		need ongoing management
	Agricultural	increase use of drip irrigation
		reduce acreage to 34k
		reduce ET to 1.8
	Socorro/Sierra	increase efficiency
		don't start water war with neighbors
		consider water banking
	Open water	unknown quantities
		need to distinguish rivers from ditches
25%	Residential	use projections
	Business/Government	use projections; no change

Summary prepared by Lucy Moore. Please contact her with comments or corrections.

Community Conversation
"Balancing the Water Budget"
Los Lunas
March 12, 2002

Facilitator/Recorder: Lucy Moore

Background: Three Community Conversations were held in March 2002 for the purpose of updating citizens on the progress of the regional water planning effort and giving them a chance to work with the "Water Balancing Exercise," developed as a tool to help citizens understand the challenges of meeting future water demands. The Middle Rio Grande Water Assembly and The Middle Rio Grande Council of Governments are working in partnership to develop a regional water plan. These Community Conversations were also supported by the UNM Utton Center (providing support for facilitation) and the Sandia National Labs (providing development of the water balancing exercise).

Each Community Conversation included presentations on the water planning process, a demonstration of the exercise tool, and a chance for participants to work with the computer model in small groups. What follows is a summary of the small group work, and general concerns raised by participants about the planning and the modeling processes at the Community Conversation in Los Lunas, March 12.

General Concerns:

Special Place for Valencia County: There was agreement that Valencia County is at the south end of the region, and is therefore at the mercy of upstream users – both in terms of water and power.

Source of Numbers: There were questions about the source of the data used in the balancing exercise, and the relationship between the exercise and the water budget developed by the Water Assembly. Credibility of the plan will depend on clear numbers supported by everyone.

Missing Factors: The group pointed out that the demands of the endangered species, like the Silvery Minnow, are not factored into the water balancing exercise. Similarly, the exercise does not account for the influence of politics and money. Nor does it have firm figures on groundwater availability in order to determine the extent of groundwater mining.

Potential Common Ground: Some felt that environmental and agricultural interests could be compatible, and that it is damaging to everyone to be divided against each other. Solutions are available; differences need to be mediated. "We are all in this together," and "we have the talent to solve the problems."

Comments on Exercise: Many felt the model was over-simplified, and that it should be put on on-line so that it would be accessible to more people.

Group 1: Balancing for the Future:

General Comments:

- need for broad education about the water situation and potential solutions
- "We are all in this together," "Compromise to strike a balance."
- Identify big users and big potential savings

Comments about the model: Clarify the source of numbers by providing a right click box next to the number that would track the source of the data.

Savings	Source	Comments
10%	Elephant Butte evap	opportunity for greatest gain; store in underground caves; move to higher elevations
	Riparian	restore & maintain open space; not just remove exotics; store runoff high in watershed
	Open water	no change; may provide incentive by paying for improvements
	Agriculture	no reduction in acres reduce evap thru efficiency measures; separate ditch evap from field use; separate domestic & irrigation wells; provide education & financial help to small farmer
	Socorro/Sierra	leave alone
25%	Residential	"Why does everyone come here?" Xeriscape, low flow toilets, water harvest; 140 gallons per person per day target
25%	Business/Government	

Group 2: Balancing the Future:

Savings	Source	Comments
25%	Elephant Butte	
20%	Riparian	change vegetation
14%	Agricultural	need incentives and legislative support level, drip irrigation, and crop changes
10%	Socorro/Sierra	decrease in agriculture
5%	Open water	flow efficiencies; cover some ditches
20%	Residential	economic disincentives to use less water
20%	Business/Government	economic disincentives; landscaping changes; gray water use; low flow appliances; less golf

Group 3: Balancing the Future:

General Comments: Solving these problems will cost money, and it is hoped that the State will choose to use some of its surplus.

Comments about the exercise: Group members thought it was an excellent show and that it should be shown to politicians.

Savings	Source	Comments
25%	Elephant Butte	reduce area, make deeper (big tech challenge)
10%	Riparian	reduce both acreage and evapotranspiration
		invite experimental site; remove non-native
6%	Agricultural	enclose as many ditches as possible
		laser level; change crops; water at night
5%	Socorro/Sierra	reduce for parity/equity with MRG region
10%	Open water	enclose ditches
		concrete line feeder ditches (account lost recharge)
		deepen holding ponds
15%	Residential	raise price water
		implement conservation measures
		zone to limit size of lots
15%	Business/Government	must benefit area; must have low water use
		mandate zoning ordinances

Summary prepared by Lucy Moore. Please contact her with comments or corrections.
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Specialists

		"Minimum Scenario"					"Maximum Scenario"				
	Water Line Item	Number of Units	X	Per Unit Use	=	Total Water Use (afpy)	Number of Units	X	Per Unit Use	=	Total Water Use (afpy)
	Inflows to the Middle Rio Grande Region										
1	Rio Grande Native Inflows	N/A		N/A		1,100,000	N/A		N/A		1,100,000
2	Tributary and Groundwater Inflows	N/A		N/A		245,000	N/A		N/A		245,000
3	San Juan/Chama Inflows	N/A		N/A		74,000	N/A		N/A		74,000
4	Imports from Socorro/Sierra Region	N/A		N/A		___,000	N/A		N/A		___,000
5	Imports from Other Sources (must identify the source)	N/A		N/A		___,000	N/A		N/A		___,000
6	Urban Storm Drain Inflow	N/A		N/A		5,000	N/A		N/A		5,000
7	*Total Water Income to the Region*	N/A		N/A		1,424,000	N/A		N/A		1,424,000
	Required Deliveries to Outside of the Region										
8	Elephant Butte Lake Evaporation	11,964 surface acres		7.96 afpy per surface acre		95,276	16,000 surface acres		9.0 afpy per surface acre		144,000
9	Socorro/Sierra Region Current Delivery Rate	N/A		N/A		100,000	N/A		N/A		100,000
10	Rio Grande Compact Deliveries	N/A		N/A		850,000	N/A		N/A		850,000
11	*Total Required Deliveries Outside of the Region*	N/A		N/A		1,045,276	N/A		N/A		1,094,000
	Uses of Water within the Region										
12	Riparian Uses	45,000 riparian acres		2.39 afpy per riparian acre		107,476	45,000 riparian acres		2.39 afpy per riparian acre		107,476
13	Open Water Uses (Other than Elephant Butte)	12,000 open water acres		5.0 afpy per open water acre		60,000	12,000 open water acres		5.0 afpy per open water acre		60,000
14	Irrigated Agriculture Uses	33,970 irrigated acres		1.75 afpy per irrigated acre		59,405	33,970 irrigated acres		1.75 afpy per irrigated acre		59,405
15	Office, Business, Commercial, and Industrial Uses	551,196 jobs		0.08 afpy per job		42,197	707,000 jobs		0.08 afpy per job		54,101
16	Domestic Uses	1,150,943 persons		0.06 afpy per person		69,057	1,150,943 persons		0.06 afpy per person		69,057
17	*Total Use of Water within the Region*	N/A		N/A		338,135	N/A		N/A		350,039
	Budget Reconciliation: Inflows minus Required Deliveries minus Use within Region										
18	Net	N/A		N/A		40,589	N/A		N/A		-20,039

Agricultural / Historical / Cultural Advocates

		Scenario 1					Scenario 2				
		A		B		C	D		E		F
	Water Line Item	Number of Units	X	Per Unit Use	=	Total Water Use (afpy)	Number of Units	X	Per Unit Use	=	Total Water Use (afpy)
	Inflows to the Middle Rio Grande Region										
1	Rio Grande Native Inflows	N/A		N/A		1,100,000	N/A		N/A		1,100,000
2	Tributary and Groundwater Inflows	N/A		N/A		245,000	N/A		N/A		245,000
3	San Juan/Chama Inflows	N/A		N/A		74,000	N/A		N/A		74,000
4	Imports from Socorro/Sierra Region	N/A		N/A		0	N/A		N/A		0
5	Imports from Other Sources (must identify the source)										
6	Urban Storm Drain Inflow	N/A		N/A		5,000	N/A		N/A		5,000
7	*Total Water Income to the Region*	N/A		N/A		1,424,000	N/A		N/A		1,424,000
	Required Deliveries to Outside of the Region										
8	Elephant Butte Lake Evaporation	18,249 surface acres		6.5 afpy per surface acre		118,616	16,000 surface acres		9.0 afpy per surface acre		144,000
9	Socorro/Sierra Region Current Delivery Rate	N/A		N/A		100,000	N/A		N/A		100,000
10	Rio Grande Compact Deliveries	N/A		N/A		850,000	N/A		N/A		850,000
11	*Total Required Deliveries Outside of the Region*	N/A		N/A		1,068,616	N/A		N/A		1,094,000
	Uses of Water within the Region										
12	Riparian Uses	42,000 riparian acres		3.0 afpy per riparian acre		126,000	45,000 riparian acres		2.5 afpy per riparian acre		112,500
13	Open Water Uses (Other than Elephant Butte)	10,000 open water acres		5 afpy per open water acre		50,000	12,000 open water acres		5.0 afpy per open water acre		60,000
14	Irrigated Agriculture Uses	45,000 irrigated acres		2.1 afpy per irrigated acre		94,500	34,000 irrigated acres		1.8 afpy per irrigated acre		61,200
15	Office, Business, Commercial, and Industrial Uses						*250,000 jobs		0.073 afpy per job		18,250
16	Domestic Uses	898,244 persons		0.0945 afpy per person		84,884	*500,000 persons		0.08 afpy per person		40,000
17	*Total Use of Water within the Region*	N/A		N/A		355,384	N/A		N/A		291,950
	Budget Reconciliation: Inflows minus Required Deliveries minus Use within Region										
18	Net	N/A		N/A		0	N/A		N/A		38,050

UUEDA

			Desired Year 2050 Use Budget					
			A		B		C	
	Water Line Item		**Number of Units**	**X**	**Per Unit Use**	**=**	**Total Water Use (afpy)**	
	Inflows to the Middle Rio Grande Region							
1	Rio Grande Native Inflows		N/A		N/A		1,100,000	
2	Tributary and Groundwater Inflows		N/A		N/A		245,000	
3	San Juan/Chama Inflows		N/A		N/A		74,000	
4	Imports from Socorro/Sierra Region		N/A		N/A		10,000	Water transfer through open market
5	Imports from Other Sources (must identify the source)						0,000	
6	Urban Storm Drain Inflow		N/A		N/A		10,000	Increase urbanization will cause more pavement with more rain water run off
7	*Total Water Income to the Region*		N/A		N/A		1,439,000	
	Required Deliveries to Outside of the Region							
8	Elephant Butte Lake Evaporation		18,249 surface acres		6.5 afpy per surface acre		117,000	Decrease Elephant Butte's surface size. Possibilities include making lake deeper, moving a portion up north or naturally shrinking size for water conservation.
9	Socorro/Sierra Region Current Delivery Rate		N/A		N/A		90,000	Imported 10,000 above
10	Rio Grande Compact Deliveries		N/A		N/A		850,000	Beneficial changes to Compact deliveries appear to be impossible (UUED Group would like to see if this can be negotiated)
11	*Total Required Deliveries Outside of the Region*		N/A		N/A		1,057,000	
	Uses of Water within the Region							
12	Riparian Uses		42,000 riparian acres		3.0 afpy per riparian acre		130,000	Increase open space within the bosque and decrease non-native plants to decrease consumptive use
13	Open Water Uses (Other than Elephant Butte)		10,000 open water acres		5 afpy per open water acre		48,000	Reduce evaporation in open ditches and lessen conveyance losses
14	Irrigated Agriculture Uses		45,000 irrigated acres		2.1 afpy per irrigated acre		65,000	Kept ag lands to same 2050 amount; increased efficiency

								(10%) while maintaining shallow aquifer benefits
15	Office, Business, Commercial, and Industrial Uses		707,000 jobs		.0672 afpy per job		48,000	Used BBER predicted jobs and require increase water efficiency by 30 % from today's use.
16	Domestic Uses		1,470,000 persons		.056 afpy per person		82,000	Used FWUP predicted population and require increase water efficiency by 30 % from today's use.
17	*Total Use of Water within the Region*		N/A		N/A		373,000	
	Budget Reconciliation: Inflows minus Required Deliveries minus Use within Region							
18	Net		N/A		N/A		9,000	Water Balanced in 2050. UUED Group used a balanced approached requiring more efficiency out of all water users while maintaining a high quality of life.

Environmentalists

			Desired Year 2050 Use Budget					
			A		B		C	
	Water Line Item		Number of Units	X	Per Unit Use	=	Total Water Use (afpy)	
	Inflows to the Middle Rio Grande Region							
1	Rio Grande Native Inflows		N/A		N/A		1,100,000	
2	Tributary and Groundwater Inflows		N/A		N/A		245,000	
3	San Juan/Chama Inflows		N/A		N/A		74,000	
4	Imports from Socorro/Sierra Region		N/A		N/A		0	
5	Imports from Other Sources (must identify the source)						0,000	
6	Urban Storm Drain Inflow		N/A		N/A		8,000	increased urbanization expected to increase runoff
7	*Total Water Income to the Region*		N/A		N/A		1,427,000	
	Required Deliveries to Outside of the Region							
8	Elephant Butte Lake Evaporation		13,780 surface acres		9 afpy per surface acre		124,000	
9	Socorro/Sierra Region Current Delivery Rate		N/A		N/A		100,000	
10	Rio Grande Compact Deliveries		N/A		N/A		850,000	
11	*Total Required Deliveries Outside of the Region*		N/A		N/A		1,074,000	
	Uses of Water within the Region							
12	Riparian Uses		56,250 riparian acres		2.4 afpy per riparian acre		135,000 10,000	includes 10,000 afpy for instream flows
13	Open Water Uses (Other than Elephant Butte)		10,000 open water acres		5 afpy per open water acre		50,000	
14	Irrigated Agriculture Uses		34,000 irrigated acres		2 afpy per irrigated acre		68,000	expect a small increase in irrigation efficiency
15	Office, Business, Commercial, and Industrial Uses						33,000	water for new uses must be obtained by conservation
16	Domestic Uses						57,000	water for new uses must be obtained by conservation
17	*Total Use of Water within the Region*		N/A		N/A		353,000	
Budget Reconciliation: Inflows minus Required Deliveries minus Use within Region								
18	Net		N/A		N/A		**0**	

Community Conversation Results

Residential Uses						Business & Government					
713,000 persons	% of Default	0.080 afpy per person	% of Default	57,000 acre feet	% of Default	343,000 jobs	% of Default	0.096 afpy per job	% of Default	33,000 acre feet	% of Default
Bernalillo County - March 4											
713,000	100%	0.06	75%	42,780	75%	343,000	100%	0.07	75%	24,617	75%
713,000	100%	0.06	80%	45,442	80%	343,000	100%	0.08	80%	26,258	80%
713,000	100%	0.08	100%	57,040	100%	343,000	100%	0.10	100%	12,928	100%
1,004,717	141%	0.06	80%	64,034	112%	488,995	143%	0.07	70%	32,756	99%
712,264	100%	0.06	75%	42,736	75%	343,000	100%	0.10	100%	32,928	100%
Sandoval County - March 6											
1,417,698	206%	0.07	85%	100,075	176%	706,699	206%	0.08	85%	57,483	174%
821,033	115%	0.07	86%	56,457	99%	343,000	100%	0.10	100%	32,928	100%
Valencia County - March 12											
1,037,736	145%	0.07	85%	70,566	124%	343,000	100%	0.08	85%	27,900	85%
1,600,000	210%	0.06	80%	96,148	169%	706,847	208%	0.08	79%	53,757	163%
713,000	100%	0.06	75%	42,780	75%	343,000	100%	0.07	75%	24,617	75%

Riparian Use						Irrigated Agriculture					
45,000 riparian acres	% of Default	3.0 afpy per riparian acre	% of Default	135000 acre feet	% of Default	48,000 irrigated acres	% of Default	2.1 afpy per irrigated acre	% of Default	100000 acre feet	% of Default
Bernalillo County - March 4											
45,000	100%	2.25	89%	101,359	96%	48,000	100%	1.69	80%	81,065	81%
45,000	100%	2.70	90%	121,456	90%	43,116	90%	2.10	100%	90,543	91%
45,000	100%	2.71	90%	121,883	90%	48,000	100%	2.10	100%	100,800	100%
45,000	100%	2.55	85%	115	85%	42,588	89%	1.77	84%	75,331	75%
45,000	100%	2.11	70%	94,816	70%	48,000	100%	1.69	80%	81,045	80%
Sandoval County - March 6											
45,000	100%	2.25	75%	101,359	75%	33,970	71%	1.79	85%	60,770	61%
45,000	100%	3.00	100%	135,000	100%	39,641	83%	2.10	100%	83,247	83%
Valencia County - March 12											
45,000	100%	2.71	90%	121,893	90%	48,000	100%	1.97	94%	94,553	95%
36,000	80%	2.39	80%	86,123	64%	34,622	72%	1.67	80%	57,932	58%
45,000	100%	2.26	75%	101,796	75%	48,000	100%	1.89	90%	90,693	91%

Open Water Evaporation						Socorro Deliveries		Elephant Butte Evaporation						Balance	
12,000 open water acres	% of Default	5.0 afpy per open water acre	% of Default	60,000 acre feet	% of Default	100,000 acre feet	% of Default	16,000 surface acres	% of Default	9.0 afpy per surface acre	% of Default	144,000 acre feet	% of Default		
Bernalillo County - March 4															
12,000	100%	4.45	89%	53,432	89%	89,949	90%	12,143	76%	9.00	100%	109,286	76%	1,424,000	1,35
11,395	95%	4.74	95%	53,975	90%	90,355	90%	15,893	99%	8.99	100%	142,869	99%	1,424,000	1,42
12,000	100%	5.00	100%	60,000	100%	100,000	100%	16,000	100%	9.00	100%	144,000	100%	1,424,000	1,48
12,000	100%	5.00	100%	60,000	100%	80,000	80%	11,964	75%	9.00	100%	107,179	75%	1,424,000	1,38
12,000	100%	5.00	100%	60,000	100%	100,000	100%	13,571	85%	9.00	100%	122,143	85%	1,424,000	1,38
Sandoval County - March 6															
16,053	134%	4.50	90%	72,237	120%	90,152	90%	8,036	50%	8.24	92%	66,179	46%	1,424,000	1,39
15,250	127%	3.64	73%	55,472	92%	112,610	113%	10,355	65%	8.10	90%	83,825	58%	1,424,000	1,40
Valencia County - March 12															
12,000	100%	4.05	90%	5,400	90%	95,025	95%	11,964	75%	9.00	100%	107,679	75%	1,424,000	1,42
11,375	95%	5.00	100%	56,875	95%	80,482	80%	12,057	75%	9.00	100%	108,611	75%	1,424,000	1,38
12,000	100%	5.00	100%	60,000	100%	100,000	100%	12,143	76%	8.13	90%	98,732	69%	1,424,000	1,36

COMMUNITY CONVERSATIONS
March 4, 6, 12, 2002
Citizen Evaluations Report

Sandoval County (Rio Rancho City Hall)

Number of Evaluations Received: 23

What information was most useful: Current water use averages; f ocus on the issues; evaporation data; computer model (several); effects of changing inputs; defining problem; initial presentations; difficulty of balancing.

What additional information would you like to receive: Better estimates of effects of changes; to know background of audience; source of data; reliability of data; tribal water use; economic analysis of decisions; realistic population projections not based on boosterism; progress made to date; what changes required to change inputs; technical information on effects of changes; costs/benefits; water use by salt cedar; effects of changing to lo-flo toilets; environmental consequences of population increase; more information; endangered species impacts; how long to depletion disaster; some history on Rio Grande channeling, use of low-flow channel; more detailed information on riparian use.

Was the computer model helpful: Unanimous yes, some yeses with following qualifications: more technical data; too limited; without cost data only a toy; more detail needed.

A new, more detailed model is under construction. Do you have suggestions for improving the current version: Continue small group discussions; include costs; discuss technical limits to change; include alternatives; include tribal use; don't bias towards developers; put on the web; more data; include data on who wins and loses from stormwater capture; include margin of error figures (e.g., + or – 5%); not clear what some numbers refer to; explain constraints to change; identify all assumptions; include costs and benefits; include feasibility of changes; limit the Elephant Butte slider.

Do you feel that your issues were well presented or dealt with. If not, what are they: Need economic impacts; address irrigation water for farmers; address flood irrigation in Corrales; yes (several); options may not be realistic; too much information too soon.

How did you hear about tonight's meeting: Friend; newspaper (several); Mike Campana; at work; mailing (several); email (several); industry participant; neighborhood association.

Have you attended earlier Community Conversations or other Water Assembly events: Yes: 8; No: 12

How can we encourage you to stay involved: Advertise meetings (several); provide updates; email; keep meetings open; short meetings at night; continue information flow; put on the web; continue small group discussions.

Additional comments and suggestions: Include fluctuations (they are real); 25 year averages are unrealistic; we are wasting a lot of time; 16 independent water planning regions are not talking to one another; get more press; make water a priority in lad use planning; bring the alternatives to the public; small groups were too noisy; thanks (several).

Valencia County (Los Lunas Comm. Ctr)

Number of Evaluations Received: 24

What information was most useful: All; group interaction with model; WBE; ideas for saving water; pie chart; seeing what people will give up; 70,00 af deficit; categories of use; current water use averages; computer model (several); effects of changing inputs; difficulty of balancing.

What additional information would you like to receive: Peer reviews; access to model itself; hjow to get politicians to increase regulations on biz and industry; source of data; economic analysis of decisions; source of population projections; progress made to date; alternatives; irrigation conservation techniques; focus on solutions.

Was the computer model helpful: Unanimous yes, some yeses with following qualifications: need cost data; made problem concrete; too simple; academic without additional components; great stimulus for discussion.

A new, more detailed model is under construction. Do you have suggestions for improving the current version: Include upper watershed; include ESA impacts; include irrigation recharge data; cite sources; provide visualization of changes; explain evaptrans. data; include native vs. non-native species use; break out domestic wells as separate category; show current and 2050 use simultaneously; more detail but keep user friendly; expand model's considerations window; more data.

Do you feel that your issues were well presented or dealt with. If not, what are they: Most yes; need economic impacts; how will changes be funded; no-homebuilders not well-represented, presentors are biased; hard to hear in small groups; evaporative losses can be reduced.

How did you hear about tonight's meeting: Friend; newspaper (several); mailing (several); NAIOP.

Have you attended earlier Community Conversations or other Water Assembly events: Yes: 10; No: 14

How can we encourage you to stay involved: Advertise meetings (several); provide updates; email; tell how information from meetings will be used; keep public involved; keep talking about taking my water for urban growth.

Additional comments and suggestions: Include discussion on where this will all lead; present information to the politicians; enact building moratorium; educate on water conservation; use media more; don't let environmentalists take over the process; stop pushing population increases; don't let one person monopolize discussion in small groups; provide more education up front; provide special presentations for municipalities.

Bernalillo County (Indian Pueblo Cult. Ctr.)

Number of Evaluations Received: 32

What information was most useful: WBE; model (several); water budget.

What additional information would you like to receive: Discuss legal issues; provide information on how others have solved problem; provide figures on MRG acreage/average rainfall; obtain input from scientists; discuss how to increase inflows; break down water use by govt., industry, business; discuss how to decrease use; provide information on which politicians are savy; other, ongoing planning efforts must be part of this process; discuss how to decrease evaporative losses.

Was the computer model helpful: Unanimous yes, some yeses with following qualifications: model doesn't make decisions; too simple; too complex; 25 year averages misleading.

A new, more detailed model is under construction. Do you have suggestions for improving the current version: Get compact delivery requirement numbers right; include drought scenario; address water quality; address effects on minnow and other wildlife; address impacts on recreation and quality of life; address legal issues; include technical variables; discuss economic effects, leasing of agricultural water rights; assumptions are questionable; inflow numbers do not adequately reflect rainfall, upstream losses, policy options, recycling; identify boundaries of what is really possible for reduction measures; too much visual information on screen; show ramifications of decisions.

Do you feel that your issues were well presented or dealt with. If not, what are they: Most yes; more public input; developers should not control process.

How did you hear about tonight's meeting: Friend; newspaper (several); mailing (several); KUNM-FM; NAIOP.

Have you attended earlier Community Conversations or other Water Assembly events: Yes: 11; No: 19

How can we encourage you to stay involved: Keep it simple, keep it real; increase public input; Advertise meetings (several); can we really make the changes discussed?; provide take-home information; provide opportunity to serve on working teams; pay me; make sure people are heard; explain what will happen with this information; involve the politicians.

Additional comments and suggestions: Not sure what the goal is; when will ultimate decisions be made; former community conversations didn't go anywhere; simplify information on screen, increase size of text; explain how Albq's San Juan Chama diversion will affect the budget; provide visualization of what the things will really lok like.

Historical Archive G-3

Community Conversation 5

5th COMMUNITY CONVERSATIONS ON REGIONAL WATER PLANNING

Which Choices Work for Us?

Picking the pieces to create our water plan

Middle Rio Grande Regional Water Plan's mission is to "Balance Water Use with Renewable Supply"

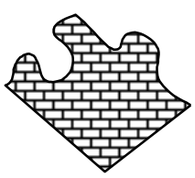
We Must Budget Our Limited Water For A Healthy Future
Help select the alternatives to do so!
Check out the recent updates to the computer model!

Which alternatives would you prefer?
Please join us for a community conversation on how to balance the water budget.

What's more, there will be a demonstration of the computer model being constructed with Sandia National Laboratories showing the updates since the last Community Conversations as well as some of the details and issues involved when considering an alternative.

The purpose of the Middle Rio Grande Water Assembly --an all-volunteer, grassroots organization-- is to develop a Regional Water Plan through an open, inclusive and participatory process. The Assembly is working in partnership with the Mid Region Council of Governments to carry out this purpose.

Help us seek a wise and inclusive solution to a serious mutual problem



Attend & Participate

Your opinion counts! Please review the list of 44 alternative action descriptions and rate your preferences. Then bring the enclosed Alternatives Booklet and completed post card to the Community Conversation of your choice. If you cannot attend the Community Conversations, please mail your completed post card.

Each Community Conversation builds upon the previous. *Don't miss any of them!*

* November Regional Forum - technical feasibility presentation & further refinement of preferences
* Winter Community Conversation series - develop scenarios from preferred alternative actions
* Spring Community Conversation series - develop & critique the regional water plan

Middle Rio Grande Water Assembly

COMMUNITY CONVERSATIONS

Valencia, Bernalillo and Sandoval Counties
6:30 pm to 9 pm

September 4	Los Lunas Village Hall 660 Main NW, Los Lunas
September 5	Bernalillo Elementary School 301 Calle de la Escuela, Bernalillo
September 10	South Valley Sheriff's Sub-Station 2039 Isleta SW, Albuquerque
September 16	Rio Rancho City Council Chambers, 3900 Southern Blvd. SE, Rio Rancho
September 17	Indian Pueblo Cultural Center, 2401 12th St. NW, Albuquerque
September 19	Belen Senior Center, 715 S. Main Street, Belen

These conversations benefit from support of the UNM Utton Center and Sandia National Labs.

For more information call Bob Wessely, Assembly Chair, at 867-3889
or Mike Trujillo, MRCOG Water Planning Coordinator, at 247-1750

Check www.WaterAssembly.org for further information!

MIDDLE RIO GRANDE WATER ASSEMBLY
Post Office Box 25862
Albuquerque, NM 87125-5862

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Picking the Pieces of our Water Plan

CC-5 Comments from cards.

Overpopulation is the core of all of the troubles of the world, including dwindling water supply and changing weather patterns, and social problems. Water education should begin with population education.

Putting the dam back in the Rio Puerco might raise the water table and keep silt from going down to Elephant Butte.

Thank you for your good work in the program.

Great planning effort!

Need to add reduction of riparian and EB evaporation to 143. These two uses are 53% of water supply.

A22 incentives = choice

A59 already pay for water

A8 I paid $9K for my well, pump, tank, etc. Metering is just a preface to start charging me for using water. ARE YOU going to reimburse me for the $9,000 I spent? Are you going to maintain my system?

There are so many people unaware of this crisis – start at Kindergarten level – every little bit of household/yard water DOES have an input.

Thank you for the mail-out. Thank you for trying.

You need much more publicity!

Decrease growth (sprawl), limit development, promote stability of population, save habitat for wildlife in the Bosque. Why predict 17% growth when not enough H_2O now. Control growth.
Most of your work's selections are useless, probably have zilch grass roots support.. Control growth, immigration, hi water use, development, etc.
I actually hope subsidence hits, financial markets tumble, etc. to decrease growth. I like Europe's stable populations.
This process is too difficult for most people. You need to ask them what their values are, what is important to them, etc.
I like the participant's idea of notifying the public broadly when water rights are to be sold or better yet don't allow people to separate water from land.
All you do when you import water is make a problem elsewhere.
I thought the specialist was a crock!

15 and 51 important but unlikely.

Stop developing until we balance the water budget. – then hold all growth to make life sustainable within our water supply.

Under A-45 you should consider upstream storage in Abiquiu Reservoir for every drop of water that is not necessary to meet compact deliveries.

Combine A44 with A18.

Stop power plant construction until there is a need. Power plants use our water and send their poroduct out of state.

There are several other alternatives that would be very useful in addition to the top 4 picks.

I like many more of the ideas than I dislike – maybe a ranking of all would give you more information.

It's easy to come up with the best and worst 10, but difficult to reduce these to 4.

I don't advocate reducing the number of alternatives – all of them have something to offer and should be explored.

Less government regulation, less development. When the land was farmland - no problem.

Don't like any of them. You've detached water from the land – nature doesn't work that way.
None of this "water budgeting" is going to work. It's all on paper. You can't create water. You have to live with what's real and to share what's available each year. The laws don't allow that they have to go or we'll end up like chaco canyon – remains of a once-thriving community.

I don't think we can balance the water budget because nature doesn't input what humans withdraw. This is an arid climate with evaporation far exceeding precipitation in all areas of the state except the high elevation areas. I would recommend outlawing blue grass lawns and we would immediately reduce use by fifty percent.

Too much information to sort through.

Use incentives and education versus regulation and punitive measures.

Too many good policies to rate.

Need riparian vegetation for proper functioning of aquatic/riparian system. No attempts should be made to reduce evaporation until we know what the consequent effects on precipitation will be.

Additional alternative – use porous pavement – allows water to soak in instead of running off.

I suggest a more generalized approach that applies to all water users equally.

A33 (Not increased supply) Watershed renewal manages water that has always been present but ignored by in-attention, abuse and stupidity!
All alternatives have benefits of varying degrees which could be addressed using the Watershed Renewal approach.

Need some no-growth/limited growth alternatives. We need to stop attracting more people – I don't want Albuquerque to become a Phoenix!

Top pick not in your alternatives: Change water law to reward conservation within water rights law!

Until adjudication takes place, you're just spinning your wheels. The same is true for ESA conflicts. A Federal judge will become the Rio Grande water master!

Sorry – there cannot be a "top" 4 picks. Please include ALL of these.

All measures must be taken to increase and institutionalize water conservation.

Stop subsidy of out-of-state dairy farms by providing cheap water to alfalfa growers – drip irrigation is conservancy.

Transportation and its effect on AIR quality may affect WATER quality. This issue also must be addressed.

Need to change the law from "use it or lose it" to allow water banking, sale, etc.

One must be cautious about using the same methods that got us into this mess (i.e. technological) to get us out of it.

NMED needs to have input.

I found it very difficult to choose top four. So many of these measures need to be taken at the same time. I generally support conservation methods over attempts to increase supply via re-negotiation, purchase, or exploitation.

Water conservation is pointless as long as the growth mongers prevail. We must not let greed and avarice ruin Albuquerque!
Top - CURTAIL GROWTH. Stop promoting it! Stop selling out to developers, discourage growth.
Bottom – Further Intel expansion, runaway sprawl. Imitating Los Angeles, destroying quality of life.

Water Rights Adjudication is absolutely critical. Implementation of the City of Albuquerque Drinking Water Plan, use of San Juan Chama. City water will also put about 47,000AFY to beneficial use in 2 year or so.

COMMUNITY CONVERSATIONS – V
COMMENTS

Los Lunas

A-61 Not a big user
A-63 Need to separate silvery minnow from use it or lose it legislation

Bernalillo

A-1 When trees are removed they could be sold as wood for stores or ground up as mulch to keep water from evaporating
Let the public participate by safely gathering firewood
A-8 Who is going to read/monitor the meters?
What is "punishment" for using more than 3 acre-feet?
This is just the beginning to charge well owners
If domestic wells only use 1% of the water, it will cost more to police and make meters than the savings in water. It's just another way to tax wells
Black – only because it says growth, try for stability
A-9 Irrigation helps
A-24 (56) 3000 sq. ft. homes – roof area, house, garage, patio, barn, will capture1,000,000 gallons of water in (1) 10" rainfall year
Albuquerque average = 8.5 " foothills = 14"
A-30 This is not to control growth/limit development, but to ensure common sense is applied to new growth, etc.
A-42 Who rules the weather rules the world, folks - think about that . . . .
A-46 **No** dumping fluoride or chlorine into the aquifer
A-52 Not growth
A-59 **No more taxes**
A-67 **No more taxes**

South Valley

No comments

Rio Rancho

A-18 This can be done **without** the "pricing schemes"
A-28 If you increase the number of people on a piece of land you will have Cabrini Green Development in Chicago (southside). That was torn down – murders were nightly
A-46 Should we pollute our underground water there will be no recovery
No fluoride or chlorine in our aquifer!!

AIPCC

A-7 I don't understand why this didn't get more blue votes. What better, low cost way is there to find out the water waste and then put on the effort to optimize and reduce. It appears by "today's water use picture" that these losses account for more than 50% of our water budget, at a 55,000 AF deficit each year

A-45 Before any efforts (read $$) are made to recover evaporative losses, we **must** determine what the impact will be on incoming (precipitation) flows

Belen

No comments

Category	Alternative Action	Alt. Id No.	CC Dot Preferences				Post Card Preferences				Alternative Action Feasibility Ratings [1]					Political Feasibility (12 responses)		Groups	Forum Groups Rating	Alt. ID No.
			Totals		Ranking		Totals		Ranking		Technical Feasibility	Physical, Hydrological, Environmental Feasibility	Economic Feasibility	Social and Cultural Implications	Legal Implications	Rating	Rank			
			M	L	M	L	M	L	M	L										
Increase Water Supply	*Watershed Plans*	A-66	1	0	41st	41st	3	0	32nd	39th	4	4	4	4	3	3.80	13	1	4	*A-66*
	Bosque Management	A-1	77	0	1st	41st	19	3	3rd	30th	4	5	4	5	5	4.47	4	2	5	*A-1*
	Reservoir Management	A-45	23	4	5th	23rd	20	3	1st	30th	4	4	4	2	2	3.87	12	3	5	*A-45*
	Surface Modeling	A-38	9	1	19th	38th	5	0	23rd	39th	5	3	5	5	5	3.87	12	4	4	*A-38*
	Aquifer Storage	A-46	13	17	12th	9th	6	10	21st	9th	4	4	4	3	3	4.13	8	5	5	*A-46*
	Reuse Greywater	A-24	16	1	9th	38th	13	2	7th	34th	3	2	2	3	3	4.20	7	1	4	*A-24*
	Reuse Treated Effluent	A-27	17	0	7th	41st	11	2	9th	34th	3	3	3	2	4	4.60	2	2	5	*A-27*
	Desalination	A-39	5	8	29th	15th	7	14	18th	4th	2	4	3	3	3	3.21	22	3	3	*A-39*
	Importation of Water	A-69	7	27	26th	5th	6	18	21st	2nd	4	4	4	2	3	2.79	28	4	4	A-69
	Water Harvesting	A-44	12	3	12th	26th	7	4	18th	27th	5	3	3	3	5[3]	3.21	22	5	5	A-44
	Soil and Vegetation Management	A-33	12	3	13th	26th	9	5	15th	23rd	4	3	4	5	4	4.07	9	1	see notes	A-33
	Vegetation Removal Products	A-2	0	3	44th	26th	2	6	36th	19th	2	4	4	4	5	3.53	16	2	3	A-2
	Storm Water Management	A-34	5	2	29th	31st	2	4	36th	27th	4	3	3	5	5	4.00	10	3	5	A-34
	Vegetation Management	A-40	3	8	34th	15th	1	8	42nd	15th	5	3	4	4	5	3.14	23	4	4	A-40
	Wetlands	A-36	8	3	23rd	26th	3	6	32nd	19th	2	1[2]	1	3	3	2.53	31	5	5	A-36
	Weather Modification	A-42	2	41	38th	2nd	0	30	44th	1st	5	3	3	3	5	2.57	30	1	1	A-42
Decrease or Regulate Water Demand	*Urban Conservation*	A-18	34	1	3rd	38th	17	0	5th	39th	4	5	3	4	5	4.20	7	2	5	*A-18*
	Urban Water Pricing	A-21	12	32	13th	4th	11	10	9th	9th	5	3	2	3	5	3.07	25	3	4	*A-21*
	Conservation Incentives	A-22	12	2	13th	31st	4	3	29th	30th	5	5	3	4	5	3.67	14	4	5	*A-22*
	Education	A-56	9	3	19th	26th	8	0	16th	39th	5	5	4	4	5	4.73	1	5	5	*A-56*
	Irrigation Efficiency	A-10	17	2	7th	31st	11	0	9th	39th	4	4	3	2	5	3.60	15	1	5	*A-10*
	Agricultural Metering	A-7	9	20	19th	8th	10	9	12th	13th	4	4	3	1	5	2.73	29	2	5	*A-7*
	Conveyance Systems	A-9	8	2	23rd	31st	8	7	16th	18th	5	4	3	2	5	3.13	24	3	3	*A-9*
	Metering Water Supply Wells	A-8	10	63	18th	1st	10	15	12th	3rd	3	4	1	2	4	2.87	26	4	1 / 3	A-8
	Domestic Well Controls	A-61	2	11	38th	12th	2	11	36th	6th	4	4	3	2	2	2.80	27	5	5	A-61
	Acequia Conservation Programs	A-60	9	5	19th	21st	5	10	23rd	13th	5	4	4	5	5	3.40	18	1	3	A-60
Change Water Uses to Increase Supply/Decrease Demand	*Low-Water Crops*	A-11	11	13	17th	11th	5	8	23rd	15th	2	4	4	5	5	3.13	11	2	4	*A-11*
	Land Use	A-30	39	11	2nd	12th	20	6	1st	19th	4	5	2[1]	5	3	2.73	29	3	4	*A-30*
	In-Fill/Density	A-28	5	23	29th	7th	7	11	18th	6th	5	4	2[2]	4	4	2.87	26	4	4	*A-28*
	Preserve Deep Water for Drinking	A-15	8	2	23rd	31st	10	5	12th	23rd	1	1	1	2	2	3.21	22	5	4	A-15
Water Rights Regulation	*Instream Flow*	A-63	14	36	11th	3rd	14	10	6th	9th	4	4	3	4	3	3.29	20	1	5	*A-63*
	Conjunctive Management	A-144	3	2	34th	31st	3	1	32nd	37th	4	4	2	2	4	3.25	21	2	5	*A-144*
	Water Rights Adjudication	A-71	19	9	6th	14th	12	4	8th	27th	4	5	3	3	3	3.38	19	3	3	A-71
	Evaporative Loss Accounting	A-51	15	2	10th	31st	5	1	23rd	37th	4	3	4	5	1	3.43	17	4	4	A-51
Water Quality Protection	*Water Quality*	A-47	5	5	29th	21st	2	0	36th	39th	4	3	2	4	5	4.07	9	5	5	*A-47*
	Domestic Wastewater	A-26	4	8	33rd	15th	4	2	29th	34th	4	4	3	3	5	3.80	13	1	4	*A-26*
	Well Head Protection	A-50	1	6	41st	20th	2	3	36th	30th	4	3	2	4	5	4.50	3	2	5	A-50
Implementation of Water Plan & Management of Water Resources	*Water Bank/Authority*	A-67	6	15	27th	10th	3	12	32nd	5th	2	4	2	3	2	3.07	25	3	2.5	*A-67*
	Water Bank/Authority	A-67																4	5	
	Growth Management	A-52	32	4	4th	23rd	19	11	3rd	6th	4	4	3	3	4	3.53	16	5	5	*A-52*
	Public Involvement Program	A-53	2	0	38th	41st	4	5	29th	23rd	5	5	3	5	5	4.33	5	1	5	A-53
	Maintain Water Resource Database	A-73	1	8	41st	15th	1	6	42nd	19th	5	5	3	4	5	4.27	6	2	5	A-73
	Active Water Resource Management	A-143	3	7	34th	19th	5	5	23rd	23rd	5	5	3	4	5	4.20	7	3	5	A-143
Water Funding	*Severance Tax*	A-59	6	27	27th	5th	5	9	23rd	13th	2	4	2[1]	3	2	2.33	32	4	1	*A-59*
	Regional Water Planning Program	A-58	3	4	34th	23rd	2	8	36th	15th	5	5	3	4	4	3.93	11	5	5	A-58

[1] Technical contract team did not evaluate or develop fact sheets for those alternatives not italicized.
Ratings for these nineteen alternatives are based on the professional judgment of technical team.
[2] Do not work well; cause evaporative losses, public health issues.
[3] OSE has authority to regulate, may do so if widespread implementation results in significant amount of water harvested.
[1] This alternative does not have a potential for water loss.
[2] This alternative has a potential for water savings.
[1] This alternative could result in some water savings.

Historical Archive G-3

Community Conversation 6

MIDDLE RIO GRANDE WATER ASSEMBLY

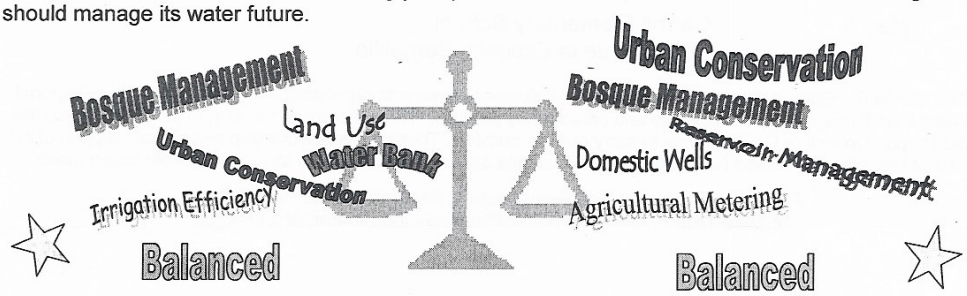
6th COMMUNITY CONVERSATIONS ON REGIONAL WATER PLANNING

Which Scenario Should We Recommend?

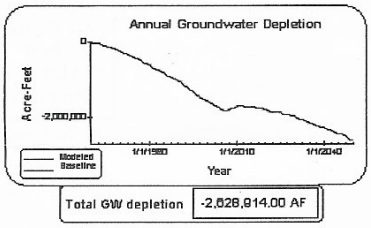
By the end of 2003, the Middle Rio Grande will have a regional water plan! This plan will quite likely affect you. In these final stages of creating the plan, it is important to have as much input as possible from people who live in the region. In previous Community Conversations, we've talked about our visions and values, acknowledged our water budget, established a mission for the plan, prepared goals and objectives, tried our hand at balancing the water budget, selected alternatives for in-depth analysis, learned about the feasibility of those potential actions, and then provided preferences.

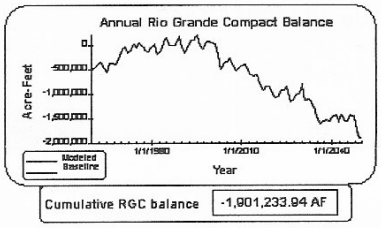
Plan's mission: "Balance Water Use with Renewable Supply"

As we progress toward the finish, we need to decide what combination and intensity of alternative actions should be included to meet the mission of the regional water plan. Not every action can be done immediately, so choices have to be made. Please join us in our next series of Community Conversations to consider scenarios from the perspectives of diverse constituent groups, and then to help build a balanced scenario reflecting your preference as to how the Middle Rio Grande region should manage its water future.



The hands-on use of a computer model, developed by the Water Assembly and Sandia National Laboratories, will help us assess some of the outcomes and issues involved as we try to "balance water use with renewable supply."





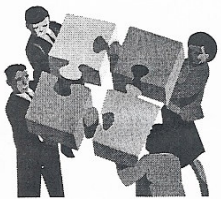
The graphs show results over the next 50 years with no changes to current water use practices. Put yourself into the water picture to redraw the outcomes.

With the scenarios we develop, we will proceed to the next Regional Forum, to be held with the Annual Assembly on June 7. At that time, a preferred scenario will be developed which will be an important input into our regional water plan.

Help create our water plan!

Join your neighbors in deciding our water future!

Your opinion counts!



Each Community Conversation series and Forum build upon the previous ones. *Don't miss any of them!*

- **June 7** **Regional Forum & Annual Assembly**
- **September** **7th Community Conversation series**
- **October** **Regional Forum**

COMMUNITY CONVERSATIONS

To encourage public participation in water planning, we are offering an ORIENTATION thirty minutes before the regular Community Conversation. For those who have not been involved or who want a refresher course, we will review the information and process which brought us to where we are today. Please pass the word!

Valencia, Bernalillo and Sandoval Counties
ORIENTATION: 6:00 pm to 6:30 pm
CONVERSATION: 6:30 pm to 9:00 pm

April 22	South Valley Sheriff's Sub-Station 2039 Isleta SW, Albuquerque
April 23	Los Lunas Community Program (formerly Training School) 1000 Main Street NW, Los Lunas
April 24	Rio Rancho City Council Chambers 3900 Southern Blvd. SE, Rio Rancho
April 29	Belen City Council Chambers 100 S. Main Street, Belen
May 5	Indian Pueblo Cultural Center 2401 12th St. NW, Albuquerque
May 6	Carroll Elementary School 301 Calle de la Escuela, Bernalillo

The Middle Rio Grande Water Assembly is an all-volunteer, grassroots organization formed to develop a Regiona Vater Plan through an open, inclusive and participatory process. The Assembly is working in partnership with th lid-Region Council of Governments to carry out this purpose. These conversations also benefit from support of t UNM Utton Center, Sandia National Labs, the Interstate Stream Commision and MRCOG member governments.

For more information call Bob Wessely, Assembly Chair, at 867-3889
or Mike Trujillo, MRCOG Water Planning Coordinator, at 247-1750

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Ms. Leslie R. Kryder

MIDDLE RIO GRANDE WATER ASSEMBLY

6th COMMUNITY CONVERSATIONS ON REGIONAL WATER

Which Scenario Should We Recommend?

"The success of any scenario depends on one's vision of a desired future, not just on water savings demonstrated by model outputs. The bottom line is about what we value."

John Brown

Agenda

6:00 Orientation
6:30 Welcome
6:40 Our Water Picture
6:45 Changing the Future Picture
6:55 Interest Group Scenario Overviews
Agriculture, Urban, Environmental and Synthesis
7:05 Water for the Future Scenario
7:10 Demonstration of Community-Based Water Management Model
7:30 It's Your Turn!
7:40 Review and update scenarios (breakout groups)
8:40 Reports & Next Steps
9:00 Adjourn

Plan's mission: "Balance Water Use with Renewable Supply"

Each Community Conversation series and Forum build upon the previous ones. *Don't miss any of them!*

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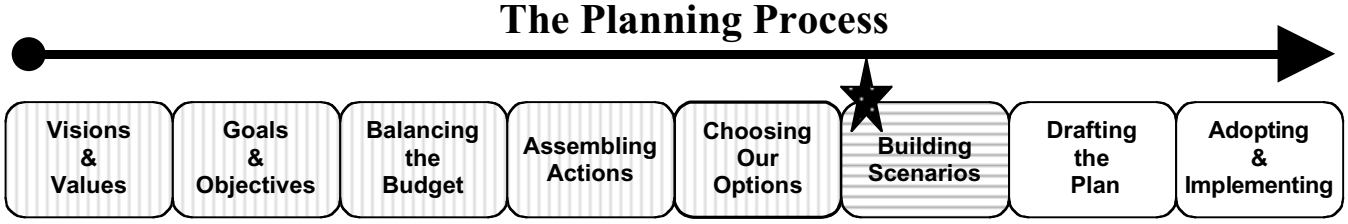
- **September 7th Community Conversation series**
- **October Regional Forum**

The Planning Process



Challenges - Each group, as they choosing actions to balance the water budget, is challenged:

(1) to consider that the current "drought" is normal,
(2) to cease the mining of the aquifer immediately,

(3) to include water quality as a consideration,
(4) to not violate the Compact, and
(5) to manage land use and water use together.

Previous Public Preferences - Throughout the planning process, the public has been able to participate in developing the regional water plan. Among the top selections of alternatives in the last series of Community Conversations and Forum have been: A-1 Bosque Management, A-66 Watershed Plans, A-18 Urban Conservation, A-45 Reservoir Management, and A-52 Growth Management. Read more about these results in the *Water Chronicles* and on our web site!

THE KEY FACT ABOUT OUR WATER:
DEMAND EXCEEDS SUPPLY

Framework for Public Input to a State Water Plan; Prepared by the New Mexico Office Of The State Engineer and the Interstate Stream Commission; December 2002

- "New Mexico's water supply is limited. Demand, needs, and rights to use water exceed the water supply available in most years. Many of New Mexico's difficult water dilemmas arise from these facts.
- "During drought conditions, the imbalance becomes acute.
- "After decades of promoting water use, New Mexico lacks both the physical facilities and the administrative infrastructure to ensure available water is delivered on the basis of water rights priorities to senior water-rights holders.
- "The other side of the coin is that in most places we lack the means to limit water uses by junior water rights holders whose demands cannot be met from the available supply. Nor have water users been adequately informed about the serious nature of problems sparked by unauthorized use."

Evaluation of Alternative Actions for Socio-Cultural Feasibility

Ted Jojola, Ph.D., Professor, Community & Regional Planning, School of Architecture and Planning, UNM

Today, the struggles over water can be discerned by relating the problems encountered when society at large attempts to sustain one practice over the other. As such, choices that arise in the allocation of water toward the preservation of the region's unique cultural identity are necessarily value-based judgments.

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Check www.WaterAssembly.org for further information!

MIDDLE RIO GRANDE WATER ASSEMBLY, Post Office Box 25862, Albuquerque, NM 87125-5862

SCENARIO DEVELOPMENT COMMITTEES (SDCs)

Teams drawn from members of various constituency groups and the Assembly at large so as to ensure a variety of viewpoints while remaining faithful to the vision of each interest. Each Scenario Development Committee (SDC) then tried to balance the water budget using the 44 alternative actions evaluated in the water planning process. Here are summaries and top three alternatives for the five SDCs.

Scenario Summary - Agricultural

In order to achieve the Agricultural constituency group's goal to maintain current acreages of irrigated farmland, it is necessary for agricultural water users and managers to implement conservation measures themselves. These include the research and planting of alternative crops, laser leveling fields, making improvements to the delivery system, and practicing sound irrigation water management.

Through an aggressive bosque restoration program that removes non-native riparian vegetation, a water savings can be gained while still maintaining the aesthetic, recreational, and wildlife values that we currently associate with the river valley.

A reduction in household and commercial use is proposed and these measures will improve the groundwater depletion component of the water budget as well as our ability to deliver water downstream since much of the municipal indoor wastewater returns to the system. The balance efficiencies achieved allows for some increase in population growth, while minimizing impairment to the aquifer and meeting Rio Grande compact deliveries in the long term.

Scenario Summary - Environmental

Our vision is of a region centered on a vibrant, healthy Rio Grande ecosystem and watershed. The river should dry only in the most severe droughts and flood between the levees in the springtime most years and otherwise mimic the natural hydrograph.

To achieve this vision the environmental scenario relies on complete restoration of the Bosque, aggressive urban conservation, growth management and other measures.

In spite of these significant and even extreme measures, however, the model showed that the environmental advocates scenario failed to meet the goal of compliance with the Rio Grande Compact. The environmental advocates scenario also comes at a very high cost - a cost we might not be willing to pay.

Equally important is the fact that the model does not permit us to create a truly environmental scenario, inasmuch as it does not permit us to take the necessary measures to protect and restore these habitats.

Scenario Summary - Urban

The Urban Users Scenario Team is optimistic about a sustainable future for our planning area that includes a vibrant Middle Rio Grande urban area, urban agriculture and responsible environmental stewardship. We believe bosque and riparian management, the development of the San Juan Chama project, and municipal water conservation are the three key management alternatives essential as the cornerstone of an a effective 50-year regional water plan.

We also believe that major diversion reductions can be achieved through efficiency improvements in local irrigation systems that will allow for large annual volumes of water to remain either in upstream storage or be used for other

beneficial uses along the river including endangered species protection.

Regional urban conservation goals need to include using less water per capita through re-use, less residential and commercial turf, and low flow plumbing fixtures. We also strongly believe that Elephant Butte evaporation should not as a consumptive debit be entirely levied to the Middle Rio Grande Planning Region. Our scenario depends on this even though it seems that we cannot model it.

Scenario Summary - Synthesis

The synthesis scenario seeks to achieve balance of regional water demand and available supply, and long-term compliance with the Rio Grande compact, while fulfilling the most important criteria of the future visions of the MRG region of urban users & economic development interests, the agricultural constituency, and the environmental advocates constituency.

The final model scenario allows for population growth through 2050 consistent with the projections of the Bureau of Business and Economic Research, while employing widespread rigorous urban water conservation measures. The scenario allows for a continued thriving agricultural community, while reducing the total existing acreage cultivated in the relatively high water use crops alfalfa and pasture grass by 20%.

The scenario allows for maintenance of 100% of the existing bosque acreage, while stipulating that all of that acreage be restored by replacing high water use, non-native plant species with lower water use, native plant species.

The scenario also uses a number of other strategies (laser leveling of fields, lining of irrigation canals, use of on-site gray water harvesting, importation or transportation of extra-basin desalinated water, reduction of urban parks and golf-courses) to a lesser degree to achieve supply/demand balance and Rio Grande Compact compliance by 2050.

Scenario Summary – Water for Future

Water is the foundation of all life. The integrity of the water resource itself is paramount. Presently, water use from surface and groundwater exceeds supply, watersheds are being degraded, and the basic cycles of the water resource are threatened.

Present management of the resource does not address threats to the economy, society, the environment, cultural values, and our very ability to live in this arid, high desert. This has created a crisis that demands a bold response. This scenario will ensure that foundation will be here for future generations.

Since all actions impact the water resource, they must be done in a deliberate fashion. It is better to take no action than to make decisions with irretrievable consequences. Water management decisions must be done with care and foresight.

We are going to connect land use with water supply, explore the dynamics between surface and groundwater uses, and look at watershed management and regeneration. We will evaluate the damage and compromise to resource systems and find ways, if possible, to rectify them. We will find ways to conserve and enhance the resource in all possible ways.

On slide:

Top 3 Alternative Selections

	Agriculture	**Environment**	**Urban**	**Synthesis**	**Water for the Future**
#1	Bosque Mgmt.	Bosque Mgmt.	Irrigation Efficiency	Bosque Mgmt.	Watershed Restoration
#2	Conservation	Conservation	Bosque Mgmt.	Conservation	Bosque Mgmt.
#3	Irrigation Efficiency	Growth Mgmt.	Conservation	Desalination	Aquifer
Balance	2015	2007	2006	2006	
Compact	2014	2030	2020	2050	

Alternative Actions

Category	Alternative Action	Alt. Id No.	Modeled	Not modeled	Indirectly modeled
Increase Water Supply	*Watershed Plans*	*A-66*		X	
	Bosque Management	*A-1*	X		
	Reservoir Management	*A-45*	X		
	Surface Modeling	*A-38*			*x*
	Aquifer Storage	*A-46*	X		
	Reuse Greywater	*A-24*	X		
	Reuse Treated Effluent	*A-27*	X		
	Desalination	*A-39*	X		
	Importation of Water	A-69	X		
	Water Harvesting	A-44	X		
	Soil and Vegetation Management	A-33		X	
	Vegetation Removal Products	A-2			X
	Storm Water Management	A-34		X	
	Vegetation Management	A-40		X	
	Wetlands	A-36		X	
	Weather Modification	A-42		X	
Decrease or Regulate Water Demand	*Urban Conservation*	*A-18*			X
	Urban Water Pricing	*A-21*	*Model includes single pricing rather than block pricing.*		
	Conservation Incentives	*A-22*			X
	Education	*A-56*			X
	Irrigation Efficiency	*A-10*	X		
	Agricultural Metering	*A-7*			X
	Conveyance Systems	*A-9*	X		
	Metering Water Supply Wells	A-8		X	
	Domestic Well Controls	A-61			X
	Acequia Conservation Programs	A-60			X
Change Water Uses to Increase Supply/Dec	*Low-Water Crops*	*A-11*			X
	Land Use	*A-30*		X	
	In-Fill/Density	*A-28*	X		
	Preserve Deep Water for Drinking	A-15			X
Water Rights Regulation	*Instream Flow*	*A-63*		X	
	Conjunctive Management	*A-144*			
	Water Rights Adjudication	A-71		X	
	Evaporative Loss Accounting	A-51		X	
Water Quality Protection	Water Quality	A-47		X	
	Domestic Wastewater	A-26		X	
	Well Head Protection	A-50		X	
Implementation of Water Plan & Manageme	*Water Bank/Authority*	*A-67*		X	
	Growth Management	*A-52*			X
	Public Involvement Program	A-53		X	
	Maintain Water Resource Database	A-73		X	
	Active Water Resource Management	A-143			
Water Funding	Severance Tax	A-59			X
	Regional Water Planning Program	A-58			X

* *In Italics are the detailed evaluations of 25 Alternative Actions (Prepared by Daniel B. Stephens & Associates, Inc.)*

* *In regular print, are the qualitative evaluations of 19 Alternative Actions (Compiled by the Alternative Working Team and the Analysis Team)*

* *Full descriptions of the feasibility analyses can be found in the Fact Sheets, located at the offices of MRCOG or at www.WaterAssembly.org/9information.html*

* Prepared by the Public Participation and Communication team of the Water Assembly, April 2003

Model Variable Setting - Agriculture

	Setting	Change
Residential		
Convert existing Resid. Prop. to Low Flow Appliances	20%	
Low Flow Appliances in New Homes	Yes	
Convert Existing Homes to Xeriscaping	40%	
Xeriscaping of New Homes	Yes	
Reduce Size of Yards in New Homes	20%	
Reduction in Consumption by Xeriscape	50%	
Price Elasticity of Demand	-0.15	
Average Price of Water (per 1,000 gallons)	To $2.00	
Convert Existing Acreage to Rooftop Harvesting	20%	
Rooftop Harvesting for New Construction	Yes	
Convert Existing Homes to On-Site Graywater Use	20%	
On-Site Graywater Use for New Construction	Yes	
Non-Residential		
Convert Existing Comm. Prop to Low Flow Appliances	20%	
Low Flow Appliances in New Construction	Yes	
Convert Existing Commercial Prop to Xeriscaping	40%	
Xeriscaping of New Construction	Yes	
Reduce Landscaping for New Commercial Property	20%	
Apply City of Albuquerque Water Re Use Plan	Yes	
Reduce Acreage of Parks and Golf Courses	20%	
San Juan / Chama Diversion Project		
Use San Juan Chama Water?	Yes	
San Juan Chama Supply	75,800 af	
Bosque		
Bernalillo Acreage	All (0)	
Sandoval Acreage	All (0)	
Valencia Acreage	All (0)	
Bosque Treatment Time Horizon	20 yrs.	
Population	Reduce	
Bernalillo	by 10%	
Sandoval	by 10%	
Valencia	by 10%	
Self-supplied	by 10%	
Agriculture		
Control – Conveyance		
Length of Conveyance Channel to Line & Cover	0	
Length of Conveyance Channel to Line	0*	
Control – Irrigation Efficiency		
Desired Farm Acreage to Laser Level	20,000	
Desired Farm Acreage to Line/Pipe Delivery Canals	0	
Desired Drip Irrigation Acreage	0	

* We played with this, but model didn't show substantial savings and cost was very high - $1 mil./yr.

	Setting	Change
Agriculture, cont.		
Control – Crop Acreages		
Alfalfa	15,000	
Corn		
Sorghum		
Wheat		
Oats	10,000	
Fruit		
Nursery		
Melons		
Pasture	10,000	
Peppers		
Misc. Vegetables	5,000	
Total Crop Area	44,000	
Total Crop Consumption	82,.000 af	
Reservoirs		
Control – Reauthorization		
Abiquiu Shared Pool Authorization		
Abiquiu Reauthorization		
Compact Renegotiation		
Year Renegotiation Takes Effect		
Minimum Reservoir Volume		
Control – New Storage		
New Northern Reservoir		
Artificial Recharge		
Year New Res. or Recharge Project is Complete		
Desalination		
Desired quantity of desalinated H_20	Not selected	
Desalination Interest Rate		
Water source		
Year desalinated water is available		
Drought		
Year Drought Begins	2000	
Years Drought Will Last	25	
Drought Intensity	5%	
Transfers from Socorro & Sierra		
Treated Bosque Acreage	20,000	
Future Crop Acreage		
Time Horizon for Change		
$ to Retire an Acre of Farm Land		

Model Variable Setting - Environmental

	Setting	Change
Residential		
Convert existing Resid. Prop. to Low Flow Appliances	90%	
Low Flow Appliances in New Homes	Yes	
Convert Existing Homes to Xeriscaping	90%	
Xeriscaping of New Homes	Yes	
Reduce Size of Yards in New Homes	20%	
Reduction in Consumption by Xeriscape	66%	
Price Elasticity of Demand		
Average Price of Water (per 1,000 gallons)	To $1.97	
Convert Existing Acreage to Rooftop Harvesting	30%	
Rooftop Harvesting for New Construction	Required	
Convert Existing Homes to On-Site Graywater Use	30%	
On-Site Graywater Use for New Construction	Required	
Non-Residential		
Convert Existing Comm. Prop to Low Flow Appliances	90%	
Low Flow Appliances in New Construction	Yes	
Convert Existing Commercial Prop to Xeriscaping	90%	
Xeriscaping of New Construction	Yes	
Reduce Landscaping for New Commercial Property	50%	
Apply City of Albuquerque Water Re Use Plan	Yes	
Reduce Acreage of Parks and Golf Courses	- by 20%	
San Juan / Chama Diversion Project		
Use San Juan Chama Water?	full use by Albq.	
San Juan Chama Supply		
Bosque		
Bernalillo Acreage		
Sandoval Acreage	21,000 acres	
Valencia Acreage		
Bosque Treatment Time Horizon	20 years	
Population	Reduce growth rate	
Bernalillo	by 25%	
Sandoval	by 20%	
Valencia	by 20%	
Self-supplied	by 20%	
Agriculture		
Control – Conveyance	MRGCD	
Length of Conveyance Channel to Line & Cover	50 miles	
Length of Conveyance Channel to Line	125 miles	
Control – Irrigation Efficiency		
Desired Farm Acreage to Laser Level	30,000 acres	
Desired Farm Acreage to Line/Pipe Delivery Canals	5,000 acres	
Desired Drip Irrigation Acreage		

	Setting	Change
Agriculture, cont.		
Control – Crop Acreages		
Alfalfa	- acreage	
Corn		
Sorghum		
Wheat		
Oats	+ acreage	
Fruit		
Nursery		
Melons		
Pasture	- acreage	
Peppers		
Misc. Vegetables	+ acreage	
Total Crop Area	- to 34,000 acres	
Total Crop Consumption	72,000 af	
Reservoirs		
Control – Reauthorization		
Abiquiu Shared Pool Authorization	Yes	
Abiquiu Reauthorization	*	
Compact Renegotiation	Yes	
Year Renegotiation Takes Effect	2010	
Minimum Reservoir Volume	400,000 af in EB	
Control – New Storage		
New Northern Reservoir		
Artificial Recharge	2015	
Year New Res. or Recharge Project is Complete		
* no increase until environmental impacts are assessed		
Desalination		
Desired quantity of desalinated water	22,500 afy	
Desalination Interest Rate		
Water source	Tularosa Basin	
Year desalinated water is available	2015	
Drought		
Year Drought Begins	2000	
Years Drought Will Last	5	
Drought Intensity	35%	
Transfers from Socorro & Sierra		
Treated Bosque Acreage	17,500 acres	
Future Crop Acreage		
Time Horizon for Change	10 years	
Cost to Retire an Acre of Farm Land		

Others

A-66: Treated 100,000 acres of 300,000 over next 50 years

A-33: Adopt policies to integrate land & water planning

Model Variable Setting - Urban

	Setting	Change
Residential		
Convert existing Resid. Prop. to Low Flow Appliances	40%	
Low Flow Appliances in New Homes	Yes	
Convert Existing Homes to Xeriscaping	30%	
Xeriscaping of New Homes	Yes	
Reduce Size of Yards in New Homes	40%	
Reduction in Consumption by Xeriscape	50%	
Price Elasticity of Demand	-0.30	
Average Price of Water (per 1,000 gallons)	$2.49	
Convert Existing Acreage to Rooftop Harvesting	20%	
Rooftop Harvesting for New Construction	Yes	
Convert Existing Homes to On-Site Graywater Use	20%	
On-Site Graywater Use for New Construction	No	
Non-Residential		
Convert Existing Comm. Prop to Low Flow Appliances	80%	
Low Flow Appliances in New Construction	100%	
Convert Existing Commercial Prop to Xeriscaping	90%	
Xeriscaping of New Construction	100%	
Reduce Landscaping for New Commercial Property	50%	
Apply City of Albuquerque Water Re Use Plan	Yes	
Reduce Acreage of Parks and Golf Courses	30%	
San Juan / Chama Diversion Project		
Use San Juan Chama Water?	Yes	
San Juan Chama Supply	75,844 afy	
Bosque		
Bernalillo Acreage	All	
Sandoval Acreage	All	
Valencia Acreage	All	
Bosque Treatment Time Horizon	15 years	
Population		
Bernalillo	85%	
Sandoval	95%	
Valencia	100%	
Self-supplied	85%	
	1,196,146	
Agriculture		
Control – Conveyance		
Length of Conveyance Channel to Line & Cover	0 mi	
Length of Conveyance Channel to Line	300 mi	
Control – Irrigation Efficiency		
Desired Farm Acreage to Laser Level	20,000	
Desired Farm Acreage to Line/Pipe Delivery Canals	15,000	
Desired Drip Irrigation Acreage	5,000	

	Setting	Change
Agriculture, cont.		
Control – Crop Acreages		
Alfalfa	H5:H17to 10,000	
Corn		
Sorghum		
Wheat		
Oats		
Fruit	+ to 2,500	
Nursery		
Melons		
Pasture	- to 7,500	
Peppers		
Misc. Vegetables		
Total Crop Area	25,000	
Total Crop Consumption	58,000 af/year	
Reservoirs		
Control – Reauthorization		
Abiquiu Shared Pool Authorization	No	
Abiquiu Reauthorization	Yes	
Compact Renegotiation	Yes	
Year Renegotiation Takes Effect	2010	
Minimum Reservoir Volume	292,000	
Control – New Storage		
New Northern Reservoir	Yes	
Artificial Recharge	Yes	
Year New Res. or Recharge Project is	2030	
Desalination		
Desired quantity of desalinated water	22,500 af	
Desalination Interest Rate	Estancia	
Water source	2%	
Year desalinated water is available	2025	
Drought		
Year Drought Begins	2040	
Years Drought Will Last	5	
Drought Intensity	20%	
Transfers from Socorro & Sierra		
Treated Bosque Acreage	20,000	
Future Crop Acreage	12,500	
Time Horizon for Change	15 years	
Cost to Retire an Acre of Farm Land	$20,000	

Model Variable Setting - Synthesis

	Setting	Change
Residential		
Convert existing Resid. Prop. to Low Flow Appliances	80%	
Low Flow Appliances in New Homes	Yes	
Convert Existing Homes to Xeriscaping	80%	
Xeriscaping of New Homes	Yes	
Reduce Size of Yards in New Homes	50%	
Reduction in Consumption by Xeriscape	50%	
Price Elasticity of Demand	Model	
Average Price of Water (per 1,000 gallons)	Model	
Convert Existing Acreage to Rooftop Harvesting	15%	
Rooftop Harvesting for New Construction	No	
Convert Existing Homes to On-Site Graywater Use	5%	
On-Site Graywater Use for New Construction	No	
Non-Residential		
Convert Existing Comm. Prop to Low Flow Appliances	80%	
Low Flow Appliances in New Construction	Yes	
Convert Existing Commercial Prop to Xeriscaping	80%	
Xeriscaping of New Construction	Yes	
Reduce Landscaping for New Commercial Property	50%	
Apply City of Albuquerque Water Re Use Plan	Yes	
Reduce Acreage of Parks and Golf Courses	10%	
San Juan / Chama Diversion Project		
Use San Juan Chama Water?	Yes	
San Juan Chama Supply	75,844 afy	
Bosque		
Bernalillo Acreage	9,451	
Sandoval Acreage	4,160	
Valencia Acreage	8,180	
Bosque Treatment Time Horizon	100% over	
Population		
Bernalillo	Default	
Sandoval	Default	
Valencia	Default	
Self-supplied	Default	
Agriculture		
Control – Conveyance		
Length of Conveyance Channel to Line & Cover	Zero	
Length of Conveyance Channel to Line	150 miles	
Control – Irrigation Efficiency		
Desired Farm Acreage to Laser Level	15,000	
Desired Farm Acreage to Line/Pipe Delivery Canals	5,000	
Desired Drip Irrigation Acreage	0	

	Setting	Change
Agriculture, cont.		
Control – Crop Acreages		
Alfalfa	- by 6,000	
Corn	Default	
Sorghum	Default	
Wheat	Default	
Oats	Default	
Fruit	Default	
Nursery	Default	
Melons	Default	
Pasture	- by 5,000	
Peppers	Default	
Misc. Vegetables	Default	
Total Crop Area	- 11,000 acres	
Total Crop Consumption	As computed by model	
Reservoirs		
Control – Reauthorization		
Abiquiu Shared Pool Authorization	no changes	
Abiquiu Reauthorization		
Compact Renegotiation		
Year Renegotiation Takes Effect		
Minimum Reservoir Volume		
Control – New Storage		
New Northern Reservoir		
Artificial Recharge		
Year New Res. or Recharge Project is		
Desalination		
Desired quantity of desalinated water	15,0000 afy	
Desalination Interest Rate		
Water source	Tularosa	
Year desalinated water is available	2030	
Drought		
Year Drought Begins	2002	
Years Drought Will Last	10	
Drought Intensity	Equivalent to 1950's drought	
Transfers from Socorro & Sierra		
Treated Bosque Acreage	No transfers assumed	
Future Crop Acreage		
Time Horizon for Change		
Cost to Retire an Acre of Farm Land		

Others

- A-66 Watershed Plans A–2
- A-67 Water Bank/Authority A–52
- A-71 Water Rights Adjudication

COMMUNITY CONVERSATIONS No. 6

First Report

South Valley
Los Lunas
Rio Rancho
Belen

Submitted by Lilly Irvin-Vitela, Ed Moreno, Facilitators

Following are summaries of comments from the Middle Rio Grande Regional Water Plan Community Conversations listed above.

South Valley

April 22, 2003
Location: 2309 Isleta Blvd.
Attendance: 2 community members

Agriculture

- Current Agriculture use should be the baseline for agriculture.
- There are rational explanations of why alfalfa is being cultivated. People are able to grow alfalfa and maintain other jobs. Alfalfa isn't as labor intensive as some other crops. Alfalfa is one of the most nutritious feeds for livestock and horses.
- Changing crops would probably require an investment in machinery, training, etc. The cost of production would increase. Even if people were willing to switch crops, without financial incentives it would be difficult.
- The agriculture scenario can be strengthened by decreasing industrial use.
- The agriculture stance would be much stronger in the South Valley especially among Ag users South of Rio Bravo who own pre-1907 water rights.

Urban/Economic Users

- Economic development should be water conscious.
- Industrial processing that is heavily dependent on water (i.e. washing wafers) doesn't make sense given our limited water supply.
- The population growth rate needs to be reduced.

- Interested in seeing a scenario and a plan that is a "win-win." The ideal scenario shouldn't create a false dichotomy between urban and agricultural users. They are both land/water uses that can and must co-exist.

General

- Desire to understand how model applies "to my yard."
- How are domestic wells calculated in the model?

Los Lunas

Date and Time: April 23, 2003.
Location: Los Lunas Community Program 1000 Main Street
Attendance: 15 community members

Agriculture

- Agriculture has an important cultural and economic role in the Rio Grande valley.
- Agricultural practices provide food for people and livestock. Changes in water distribution change the price of food and the ability of farmers to continue farming. This hurts rural communities the most.
- Economic development should strengthen agriculture rather than undermine it. There needs to be a solid connection between local industry and farmers. For example, General Mills could have a relationship with local farmers to grow crops for cereal.
- NAFTA and global economics are affecting agriculture so we must be making decisions with an understanding about larger context.
- Agriculture creates a greenbelt in the desert and a habitat for wildlife. Without a greenbelt, desert conditions will intensify. A greenbelt is needed to cause rain.
- It would be difficult for Ag. to keep current acreage in production and decrease water use by 20 percent because 90 percent of farms are already laser leveled. Concrete ditches only make sense in some places and aquifer recharge is lost when ditches are lined.

- Agricultural subsidies have been used successfully in water management efforts. For example, in Yakima, Washington, farmers who did not use there share of water so that Salmon could spawn and make it up the river were compensated for crop losses.
- Sense that there are educational initiatives that would address misuse and mismanagement of water.

Conservation

- There is no incentive to conserve water locally if that water is going to be used to benefit the growth of other communities in the region.
- Farmers aren't interested in conservation for the sake of urban green front yards, unchecked growth, and "water hungry industry."
- Perception that the Rio Communities are all xeriscaped and Albuquerque has grass laws as a standard.
- Conservation on the part of rural users makes sense in the context of being able to better use existing water resources to increase agricultural production locally.

Specific Feedback for Synthesis

- There is an assumption that agricultural land will be moved out of production. The rate of "natural attrition" was questioned. This is a large part of how water "balance" is achieved. This makes agricultural users have an unfair burden for meeting water needs.
- Desalination "This option is ridiculous. We need to live within balance."

Environment

- Environmental and agricultural goals have common ground.
- Must stand together to exert political influence.
- Lining ditches or covering ditches takes away wildlife habitat.
- There is broad concern about water quality and perception that even when water "looks clear when it has been treated it's not the same."

General Comments/Questions

- How does each scenario affect domestic well users?
- What is the timeline for this planning process?
- How does it fit in with statewide planning on water?
- Farmers should be treated like shareholders in a corporation.
- Concern that WA/COG not an honest broker.
- Concern that input from farmers at the regional forums is limited because forum located in Albuquerque.
- Who ultimately makes the decision at state and local levels?
- Does input affect real world issues like elephant Butte?
- Are Abq. Industrial and development interests going to control the decision?
- The burden is on local communities to get involved and organized to influence the planning process and keep elected official accountable.

Feedback on the Model

- It's difficult to understand for the audience.
- The slides seem washed out and the print is too small.

Rio Rancho New Mexico

Date and Time: April 24, 2003
Location: Rio Rancho City Council Meeting
Attendance: 8 community members

General Feedback on the Model

- Does the model compare costs accurately?
- A detailed economic analysis needs to be done in each community to support decision-making.
- Users are willing to bear some costs.
- Decision-making needs to look at macro and micro picture. The current model is for Macro picture and choices.
- The agriculture and environmental scenarios seem very similar.
- There is a dilemma of well irrigation for agriculture coming from drinking water supply. Would metering change this?
- The importance of understanding the past and connecting it to the future happened by allowing people to tell their stories. Stories can't be modeled.
- The disconnect between land use and water planning is happening at the discussion level, the planning level, and the decision-making level.
- Paper water rights and actual wet water are two different things.
- Education is key but cannot be accurately modeled.

Urban

- Water pricing in this scenario is 2 and 1/2 times the current Rio Rancho price. People will be "pissed."
- As price increases there is a greater incentive to harvest water and use other conservation methods.
- The cost of water will increase. Block pricing may be a way to off set costs for low-income and fixed-income water users.
- The political cost of raising water rates is high. It seems like a tax.
- It is easier to encourage conservation in new development through building codes than trying to retrofit.

- Retrofitting would require financial incentives.
- A possible alternative to increasing water price (and treating water as a commodity) is charging more for utility infrastructure/ delivery systems.
- In Rio Rancho approximately 58 percent of the budget comes from new development. In order to have the political will to support demands on development the economic base in Rio rancho has to be more diversified.
- The regional water plan has to represent urban interests.
- If there is a conflict between municipal use and having water in the river, participant believes "not a drop should go in the river."
- Criticism of the requirement that Rio Ranch had water rights in hand before development. Believes this is an unequal application of the law.
- Why should municipalities worry about violating the compact and legal fees, it is a state problem?
- Bosque conservation costs estimates are off. Believes the cost will reduce over time as technology improves.
- Aggressive urban conservation does not change the compact positively. (26,000 acre ft costs $13 million)
- Conservation- If 100 percent of existing and future homes used grey water, not much water would be gained. The aquifer would benefit.
- Rooftop harvesting- will save 8,000 acre ft for $104,000. This is $13 per acre ft. It doesn't impact the aquifer significantly but it sets a new mental attitude about the value of H20.
- If new development built in harvesting infrastructure, the cost associated with bonding to purchase water would off set the costs.
- Growth controls- Urban growth boundaries can seem hypocritical. "I've got mine. Now close the door."
- Modified growth control seems best.

<u>Agriculture Scenario with a Stronger Environmental Perspective</u>

- The numbers on conservation are low.
- The size of yards is important. More lots are not necessarily better.

- Inside the home water use is also important.
- Concrete ditches help but recharge is lost.
- Do high slider values skew conservation low-flow?
- Ag could increase low-flow to 40 percent
- Increasing cost of water by $1 okay but concerned about elasticity
- Price elasticity shrinks when conservation measures are implemented.
- Its possible to have all needs but conservation is key.
- People can stay in business and the community can grow if everybody uses less water.
- There must be the political will and a shift in attitudes to demand conservation measures.
- Concerns about blue grass use of water
- A change in price along with other measures has only a small effect.
- Recommend changing the rooftop harvesting to 5 percent-10 percent because drought, timing, costs, and tanks are barriers to implementation. New construction should be kept the way scenario group has it.
- Driveways and landscape harvesting is useful.
- Agree with scenarios use of grey water.
- Grey water- 20 percent of the golf course is ok with reuse.
- Retrofitting requirements will slow growth on new homes but will affect the price of homes.
- Conveyance- disagreements about the gains and losses associated with diversion savings, habitat, seepage/and recharge although saving associated with evapotransporation.
- Crop acreage- management is key there is a lot of over watering.
- Proper management requires education and laser leveling.
- Managing water better should allow saving alfalfa acreage. (Alfalfa is high in nutrition.)
- The model vs. real world conditions in irrigation will reduce model coefficient.

- The oat slider bar should be decreased to an equal level with corn. Misc. vegetables should be reduced.
- Education is important in all of these measures.

Synthesis

- Desalination is a way to be proactive.
- The value of desalination is currently underestimated.
- Waiting to use this measure until desperation kicks in is short-sighted.
- Desalination should be used sparingly now and as technology catches up and the process costs less it can be used more extensively.
- Waste water from households should be treated and recycled for human consumption.

Water for the Future

- Agriculture has provided a haven for recreation.
- Must coordinate land and water use.
- The rampant waste of water in homes, irrigation, and business is reflective of how all resources are wasted. Farmers should not be the target of blame. There needs to be shared responsibility.
- Farmers do face a dilemma when surface flow to water apple orchards is not available. There is a desire to use groundwater. However, that water is drinking water and using it sets a precedent that golf courses, car washes and others might use.
- There is a need to meter wells and septic tanks to see how water is actually being used.
- Attitudes in general demonstrate a lack of awareness about long-term needs and the big picture.
- There isn't a far reaching conservation sensibility.
- Is education the answer to conservation attitudes or do people only respond to disaster? Are legislators afraid?
- Chinese elms have to go.

- History lessons-

  There was no laser leveling/people leveled by hand.

  Grapes are water efficient but soil was too alkali, now the soil conditions have changed again. Growing grapes is water efficient.

  Co-ops make economic sense but are hard for independent minded farmers.

  When people cleaned and maintained their own shared ditches, they valued every drop of water.

  Harvey Jones was an important local person. He built bridges, was appointed as flood commissioner.

  Grower's Market started in the 1960s; Corrales has up to 60 growers now.

Belen

Date and Time: April 29, 2003
Location: Belen City Council, 100 S Main St.
Attendance: 6 community members

Comments/Concerns

- How can you have growth with a deficit?
- The cost of some solution to the water issue seem very high
- Power Plant Issue- People are fighting in part over the amount of water that will be used.

Conservation

- Already conservation efforts taking place in Valencia County. There is a xeriscape demonstration garden near the UNM Valencia campus. There will be a Water Fair there on May 17, 2003.
- Comparisons with Albuquerque are interesting because ABQ. has tree landscaping everywhere including medians.
- Conservation requires users being accountable for their use of water.
- Sample metering of private wells may give a clearer indication of how water is being used.
- Water quality issues might be better addressed if wells and septic systems monitored.
- If the cost of water increases, people are more likely to conserve water.

Desalination

- Desalination didn't save as much water as people expected.
- If 15,000 Acre feet a year are taken from Tularosa by 2010 the RGC is at -1.63 the aquifer is at -2.3

- The costs were figured as follows: Tularosa $2.13 per 1,000 gallons, Estancia $1.67, and Abq. $1.5.

Legal Issues

- Why can't the compact be changed? Nothing is the same as it was in 1938. Why do we have to abide by a contract from back then?
- Even small amounts of water bring out emotion.
- Belen is affected by Albuquerque growth.- 60 percent of Belenites work in Abq.

Watershed/Bosque Management

- Bosque Management makes sense because people could use the bosque for recreation if undesired vegetation was cleared.
- Watershed restoration is also important- pointed to projects being done by Ted Turner.
- Federal land managers also have a role in dealing with water issues through coordinated land/water management efforts.
- Better management of current bosque would reduce fire hazard.
- The synthesis numbers for bosque restoration should be lower because there are some areas including pure cottonwood areas and pure tamarisk (depending on level of evapo transporation) areas that would not be restored.
- Does bosque management include large irrigation ditches that have russian olives and tamarisk?
- 50 percent Restoration would be a more feasible number.

Agriculture

- Laser leveling is less expensive and more common. Many fields have already been laser leveled. Uncertain how much more of an impact additional lasering would create.
- Sub-irrigation may be another efficiency measure- The technology is being piloted in Socorro. It is very expensive and would require subsidies or tax credits but proponents believe you use only one-half of the water you use in more traditional methods of irrigating.
- Agricultural efficiency improves the compact.

Who's Not Here

- Pueblos
- Recreational Users/ Elephant Butte
- All stakeholders in the region need to be part of the process

COMMUNITY CONVERSATIONS No. 6

Second Report

Albuquerque

Bernalillo

Submitted by Lilly Irvin-Vitela, Ed Moreno, Facilitators

Albuquerque

May 5, 2003

Indian Pueblo Cultural Center

Attendance: 20 community members

Environmental SDC

- Residential conservation- no change recommended
- Water pricing- no change recommended
- Grey water re-use and harvesting- no change recommended
- Bosque Treatment- no change recommended
- Agriculture conveyances
    - line more from 125-150
    - 0 (zero) ditches should be covered
    - Farm acreage to be lined/piped- increase from 5,000 to 10,000
    - Land use- changing from agricultural land to urban land should be less profitable to maintain agricultural practices. Land use policies should support no loss of farmland to urban use.
- Crop acreages- reconfigure.
    - Alfalfa change from 12,000 to 10,000;
    - Misc. Veg. increase from 3,000 to 5,000
- Reservoirs-
    - Abiquiu reauthorization change from no to yes
    - change minimum in Elephant Butte from 400,000 to 300,000
    - new storage no change recommended
- Population- no change recommended

Urban SDC

- Irrigation Efficiency-
    - Irrigation uses should be modernized.
    - Some irrigation systems should be covered others should not.
    - Ditch system is part of the bosque. Lining ditches would reduce riparian vegetation/wildlife.

Urban residential/Non-residential Conservation-

- Size of yards- slider label should specify irrigated
- Need more incentives to convert lawns to xeriscape
- Lawns are part of the urban experience
- Keep parks acreage because people have smaller lawns.
- Xeriscape golf courses
- In the model separate out parks and golf courses.
- Needs to look more at urban based water management initiatives

Reservoirs- store more in Abiquiu

<u>Water for the Future</u>

- Subsidence- Subsidence is a real and legitimate threat.
  - Once the aquifer is depleted and there is geological damage, it cannot be recharged.
  - People are uncertain of how close we are to this irreversible damage.
  - Participants expressed interest in addressing this issue starting with doing a study of where and to what extent subsidence is already occurring within the region.
- Comparisons of Urban and Agricultural Use- Participants question who the big water users are in the region. There was a perception that agriculture is the biggest user. According to WA data, the urban and agriculture use within this planning region is roughly equal.
- Metering- There is a precedent for metering wells already. In Bernalillo County for example, three families who share a well are required to send the State Engineer's Office meter readings.
- San Juan/Chama- Dependence on San Juan Chama water may be a false hope. Owning the paper water rights does not insure that water will be available to the extent it is demonstrated in the model.
- Conservation- Water is finite. "Water is becoming more precious than oil."
  - We have a responsibility to use the resources we currently have better.
  - Improving design standards and building codes could save water.
  - Using porous pavement allows water to recharge into the aquifer rather than evaporate. It also saves money in infrastructure because water does not sit and damage roads and parking lots.
- Grey water- There is already the technology to use grey water from washing machines and bathtubs. There is also recent legislation permitting specific uses of grey water.
- Water harvesting-General support in group.
  - Rainwater harvesting encourages people to think about water as finite and precious.
  - Practically speaking, harvesting rainwater allows people to use what rainfall is available.

- Education- More education needs to occur to respond to the disconnection between scarce resources and wise use of those resources.
    - People need to internalize the responsibility for changing water use habits. One participant advocated "leading by example" and learning from and "valuing the people who are already doing it."
- Supply and demand for water is out of balance- current supply is misunderstood, misused and abused.
- Evaporation- need to move reservoirs up North to reduce evaporation. People considered the idea of moving water to Wagon Wheel.
- Irrigation Efficiency- participants expressed concern about loss of recharge and loss of ditches as community open space.
- Bosque restoration-Group suggested working to restore the entire watershed, not just the riparian areas.
    - There was a consensus that dealing with the whole system would be of greater benefit to all of the component parts including the bosque.
    - The idea of improving building design requirements arose again. Specifically, leaving open space, not building in flood plains, and using porous pavement were encouraged.
- Educate developers towards open space ethic.
    - People are happier and healthier when they live where there is a respect for nature.
    - A local example is the Sandia Heights area.
    - In Rapid City, SD the river that runs through the middle of the city is protected. This allows developers to make more money in surrounding areas.
    - More houses don't necessarily mean greater profit. Homes that people truly value because of their connection to nature are profitable.
- Revisit the Compact- There was a sense that compact requirements are impossible to meet and renegotiating the compact would benefit all stakeholders.
- Water Quality-
    - Concern about arsenic being diluted by being put in with cleaner water.
    - We need to not only worry about what upstream users are sending down but we need to look at what we are doing in ABQ. To downstream users.
    - Consensus that we should start exploring other sewerage treatment procedures.
    - Local examples of constructed wetlands at Isleta, Los Padillas, and Paul Lusks' home give hope that we can change how we use our water. Wetlands were discussed as a viable option that has other benefits as well to our environment. People cited the wetlands project as a way to change water behaviors "through inspiration rather than mandates."
    - Concern was expressed that new contaminants such as pharmaceuticals have found their way into the water supply through human waste.
- Pueblos- Do Pueblo's have a different water ethic?

    - Belief that there is something to learn from how our indigenous neighbors use water.
    - Decision making about water seems to be kept local in traditional communities.
    - Albuquerque also has a history of local governance of water issues. This has changed.
- Connect land use to water use- any real world solution that does not connect water and land use will create only short-term benefits and long-term problems that will require solutions. Planning for our children is real and legitimate. "What we do now does impact our future generations."
- Crisis Motivates- people are concerned that only crisis will motivate change. Without a sense of urgency, the core problems will not be addressed.
- General Question-
    - What do we value water for?

<u>Agriculture SDC</u>

- Agriculture is part of our heritage.
- Yard size- what is the reduction in yard size compared to in the model? Many people already have small yards.
- People need education on xeriscape choices.
- How does price drive conservation?
- Don't count on one approach to solve water problems.
- Irrigation Efficiency
    - Drip irrigation- belief that some people will use it. In AZ, for example, drip irrigation has 17 year longevity. Advantages of drip to the farmer include fewer weeds, less labor, and some pest control.
    - Agriculture land that withstands development pressures would be good candidates for drip irrigation. The multiplier effect of drip on agricultural income is large. However, this approach would make the most sense in Las Cruces where there are larger acreages in agricultural production.
    - Laser leveling in the model requires financial incentives.
    - High tech solutions like soil moisture irrigation scheduling are included in the model are hard to coordinate with acequia schedules.
    - The water management system and bureaucracy needs to change to be more responsive.
    - There is a disconnect between the technology available through the universities and farmers.
    - Crop types- sorghum, oats, wheat use less water than alfalfa
    - The net loss of agricultural land is due to development pressures not lack of water.
    - In SF County, 3afy/alfalfa = _ afy/home. 8 homes would require only 2afy.
- Metering Wells

    - Water quality problems arise when individual wells and septic occur in high densities.
    - Regulating wells statewide is hard to do. Moreover, only some areas are a problem.
    - Sample metering might be a good compromise.
    - Wells aren't modeled due to limited information.
    - Metering in agriculture is perceived as a threat to independence.
    - It's not fair to regulate and penalize well users and let the city continue to pump.
- Bosque restoration- This is the common ground of the scenarios but may be difficult.
    - It is very expensive.
    - Will require re-vegetation and continued maintenance to control exotics.
    - There is a need to recreate habitat. For example, the willow flycatcher lives in salt cedars but that is not their true habitat.
- Desalination is costly and salt disposal creates an environmental problem.
- There is a disconnect between ground and surface water.

Bernalillo

May 6, 2003
Carroll Elementary School
Attendance: 12 community members

General Questions

How does the model deal with water rights? (It doesn't.) How will water rights adjudication affect water planning? Consider the real world consequences and political support for our water choices. Texas will sue us for water. How will we pay our water debt?

Agriculture and Environment

Participants agreed to address both constituency groups by examining the agricultural scenario with an environmental sensibility. Participants agreed to do this because there are overlapping interests.

Residential

- Group agreed that new homes should be converted and that xeriscaping is important. However, participants encouraged the WA to consider that low flow toilets aren't perfect. Sometimes they require more flushing so the water savings is lost.
- The model should also include evaporative coolers as conservation appliances.
- Maybe creating incentives to use community facilities instead of individual appliances would save water. For example, washing machines in private homes are big culprits for water waste.
- People are concerned that reducing yard sizes may decrease outdoor irrigation but if that land is just replaced by more homes there isn't necessarily a water savings. There is increased congestion when there are higher densities. The group spoke about unintended consequences of this action and the need to plan to address those possibilities.
- 100% low-flow/ water conserving appliances seem to hurt the compact on the model. But water that is not pumped from the aquifer acts as recharge to the river. It is not a closed system.

Bosque Restoration-

- This is very expensive and time consuming.
- The safest way is to cut down unwanted vegetation rather than spraying. But spraying is cheaper because of labor costs.
- Contracting people to restore the bosque would require educating them so there aren't undesired outcomes.
- Restoration has to happen responsibly and will require re-vegetation. For example, what happens to the vegetation that is taken out? Does it go to land fills or is it reused in some way?

- It's important to have water in the Rio Grande except during really dry months. This needs to be scheduled and predictable so farmers can plan accordingly.
- What will happen to the bosque if cottonwoods continue to die and not be re-grown because there is no flooding? Desire to have a greenbelt.

Land Use Patterns-

- Shouldn't allow developers to build on difficult slopes, flood areas etc.. because then there are problems with water run off. Build with the environment and don't allow grading.
- Keep the growth rate sustainable given our natural resources. if there isn't water, don't build.

Conservation-

- Conservation requires shifting attitudes and beliefs about water. People need to understand that water is finite.
- The model doesn't address education but education is critical to changing the way water is used.
- Education is needed not just policy change.

Waste Water Treatment-

- We might be better served to stop treating our sewage with water. Dry sewage treatment might make more sense in NM.

Domestic wells-

- Are domestic wells scapegoated?
- Recommendation to stop sinking new wells and grandfather in new wells.
- Sense that domestic wells cannot be controlled because it is a land use issue.

Reservoirs-

- One recommendation to store water in Albuquerque's downtown.
- The majority of the group saw the value of storing water in Northern reservoirs rather than Elephant Butte because of evaporation problems.

"Placitas" Group

- Low flow appliances mean more Compact deficit but less groundwater depletion.
- Xeriscape reduces water use and keeps surface water and groundwater whole.
- Even with Bosque restoration there is still a deficit in the compact.
- The difference in the compact deficit between a 20 year restoration project and a 10 year restoration project is only 74,000
- Need to be realistic about the water problem and plan with the political and legal issues in mind. The model does not do this.
- Water rights exist within a market system and this plays a role in how water resource decisions are made.