



*League of Women Voters of New Mexico*

**Please  
bring this  
with you**

## **WATER STUDY**

The three-year study of Water Supply and Demand approved by the League of Women Voters of New Mexico has been completed. A consensus meeting will be held on Monday, January 11, 2010, 11:30 a.m., Good Samaritan Society Social Center, Creative Arts Room, 3011 Buena Vida Circle.

Four questions are being asked during the unit meeting discussion:

1. What elements of “public welfare” are most important?
2. What should be the role of regional water planning:
3. How should land use be tied to water availability
4. Why conserve water?

One-page background papers appear below, followed by a list of consensus questions and criteria that need to be evaluated before coming to the Lunch Unit Meeting.

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### **Components of Public Welfare**

The New Mexico Water Code enacted in 1907 specifically states that the “public interest” must be taken into account in the allocation of water. Amendments in 1985 substituted the phrase “public welfare” for “public interest.” Since there is no longer any unallocated fresh water in New Mexico, the legal significance of “public welfare” today arises during the transfer of water rights. The legislature has given the State Engineer authority to deny an application for a new water right or a water right transfer if it will impair existing water rights, is contrary to the conservation of water within the State, or is detrimental to the public welfare of the State. In practice, the State Engineer has made decisions based on only the first two of these criteria, so that the definition of “public welfare” remains unclear. However, New Mexico courts have held that the term should be construed broadly to include” health and safety, recreational, aesthetic, environmental and economic interest.”

In an effort to give guidance to the State Engineer, most of the 16 Regional Water Plans include a public welfare statement or some equivalent. A review of those statements reveals a number of shared values. Protecting the quality of the water is a universal goal as are assuring an adequate water supply, promoting conservation and efficient water use, and supporting agricultural sustainability.

A major source of disagreement both within and between the regions is illustrated by Sierra-Socorro’s plan that calls for managers to consider the impact of water projects on traditional users and the economy while also protecting the rights of individual water rights holders. The Lower Pecos Region concludes that the uses will be determined by economics while the Mora-San Miguel-Guadalupe Regional Plan states that changes in water use “should reflect decisions made from a cultural and spiritual connection to place.”

Of course, the increasing demand for water rights is due to growth. The “public welfare” statement of the Middle Grande Region (MRG), where there is already a deficit, says, “We recognize the current deficit situation and have a duty to balance water use with renewable supply, starting now and in the future.” More controversially, among the goals for the planning process included in its General Summary, the MRG lists “balancing growth with a renewable water supply,” a goal that was accepted by the Water Assembly (composed of volunteers), but not by the Water Resources Board (composed of local government representatives).

All of the plans include a reference to the environment or the benefit of healthy watersheds, but the Federal requirement for in-stream flow is frequently regarded as an imposition. There are some exceptions. For example, the Southwest New Mexico Regional Plan refers to the “unique values of the diverse ecology of the Gila Basin and other surface water resources in the region.” Environmentalists in the state complain that most of the regions have failed to give adequate value to healthy rivers.

Another important category of “public welfare” statements deals with the decision-making process. In a lengthy statement the MRG calls for a transparent public and participatory process when water rights are transferred. The Taos Regional Plan originally sought to create a review process for water transfer applications in order to assure consideration of the public welfare, but the participants failed to reach consensus. Instead, the plan emphasizes the gathering and dissemination of information about the capacity and condition of local water resources.

Clearly, consideration of public welfare raises difficult economic, environmental and social issues. But although there may be problems associated with the implementation of a public welfare criterion, it does provide a mechanism to broaden the protection of water resources beyond the constitutionally mandated criteria of “beneficial use” and “prior appropriation”.

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## **Regional Water Planning**

New Mexico legislators initially called for regional water planning in the late 1980s to prevent the transfer of unappropriated water out of state, but by the time the 16 regional water plans were finally completed, between 1999 and 2008, the emphasis had shifted to addressing the gap between supply and demand.

Theoretically, the completion of a water plan could help a region to retain local control of its water by assuring compliance with inter-state compacts. It could also ensure water for future generations while protecting property rights and preserving the values of the residents. However, the planning process will need to be improved to accomplish those goals.

To achieve a realistic water budget, the plans require adequate accurate data describing the available groundwater and surface water, realistic population projects, and information about variables affecting the water supply, such as evaporation and climate change. In fact, in many parts of the state the aquifers have not been mapped, and acequias and domestic wells are unmetered. Flow requirements for endangered species are sometimes omitted and environmental impacts of development projects are ignored.

Although the plans were created with significant opportunity for public participation, they are not mandates. They include discussion of the advantages and disadvantages of the alternatives available to meet the demand, but they generally fail to choose options and plans for their implementation.

Inclusion of a project in the regional water plan is a criterion for funding by the Water Trust Board. However, there is no requirement for land use plans to defer to the water budget in the regional water plan. Instead, many local government assume that new supplies will be forthcoming as needed.

Among the regional plans there is a lack of consistency in terminology, units of measure and population projections. Because there was no collaboration between regions, there is also no consistency in planning for adjacent lands, even those within the same basin. For instance, Jemez y Sangre and Middle Rio Grande proposed to import water to help reduce deficits in supply. But the most accessible source of water rights, Socorro-Sierra, found that it cannot afford further extra-regional transfers.

Those three regions are jointly subject to the obligations of the Rio Grande Compact. The Compact specifies how much water must be delivered to Elephant Butte Reservoir as a function of how much passes the Otowi Gage near Los Alamos. The simulation study reported in the Middle Rio Grande (MRG) Water Supply Study completed by S.S. Papadopoulos and Associates in 2004 found that even under year 2000 climate and development conditions there was an average annual compact debit of 40,000 afy. In addition, about 70,000 afy of groundwater were being removed from the aquifer. Thus demand already exceeds renewable supply in these regions.

According to the Papadopoulos report, implementation of options in all three regional plans could reduce the average compact debit to 7,000 afy by 2040. However, this would require the retirement of 25% of MRG agricultural lands, among other things. Even with all these changes and assumptions (some rather optimistic), the debit would rise back to 40,000 afy under extended drought conditions such as might be produced by climate change.

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### **Water Supply and Land Use**

New Mexico is an arid state with a rapidly growing population. In 2000, according to the 16 regional water plans, 3.3 million acre-feet of water was used. The projected demand for 2040 is 4 million acre-feet. The state's surface water is already fully appropriated, and groundwater aquifers, the source of most municipal water, are being depleted. The San Juan-Chama Project (SJC) will provide only a fraction of the needed increase in supply. Some areas have plans to drill deep wells to access brackish water, but production will be costly. Conservation and watershed management can help reduce the demand, but they will not suffice. Nor can the expected to develop and fund another project on  
Meanwhile, climate change models indicate that decreased snow pack and earlier snowmelt will affect the run-off that feeds the rivers.

-3- Federal government be the scale of the SJC).

The present disconnect between land use development and water availability has unintended consequences. The Office of the State Engineer (OSE) is responsible for water administration, while cities and counties made decisions about land use. Currently, no structure exists for coordination between the two levels of government. In effect, land use policy within cities and counties determined the demand for water, which is often satisfied by the transfer of water rights from individual farmers to residential community. Little or no consideration is given to the impact on the community where the water rights originated, or to the effect on the environment beyond the protection afforded by the Endangered Species Act. As a result the value of water rights has skyrocketed, threatening the survival of traditional agricultural communities.

The establishment of mechanisms linking land development with water availability could give some protection to those communities as well as helping to avoid further destruction of the aquifers, greater fragmentation of the landscape, and the loss of additional aquatic ecosystems. The question is how to achieve the goal. The Subdivision Act was passed in 1995 to prevent the sale of new homes lacking basic services. The Act requires a developer who is planning to subdivide a large parcel of land in an unincorporated area to demonstrate to the OSE that he can furnish sufficient water to meet the maximum annual water requirement. The OSE then investigates the hydrology and water rights and, after a full review of the application, issues an opinion. But a recommendation from the OSE is not mandatory for approval by the county, and cities are free to adopt their own procedures.

Currently, developers can avoid the Subdivision Act by drilling domestic wells, which are generally unregulated. The number of domestic wells in the State has doubled since 1995. Increased regulation of domestic wells could produce better accounting of the water pumped from the aquifers and help avoid impairment of existing water rights.

New guidelines for land use and zoning ordinances could address the impacts of local land use decisions on riparian areas, wildlife migration corridors, and aquifer recharge. The permitting authority could be required to demonstrate that proposed developments are consistent with the regional water plan, including the public welfare statement. To assure the long-term sustainability of a developer's water supply, an assessment of the impact of the development on other users could be required.

Other possible approaches include a state moratorium on new development pending adjudication and a limit on growth in areas where water is not available.

The argument against any of these changes is that they will increase the cost of new housing and may make the state less appealing to new industry. The argument in favor is that, if development is not linked to a renewable water supply, we risk the enormous expense of violating the Rio Grande Compact, losing many valued characteristics of our state, and still running out of water due to prolonged drought.

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## **Conservation**

Like public welfare, conservation is another undefined criterion that the State Engineer is supposed to consider in the allocation of water. LWVNM has addressed conservation in its position on Natural Resources:

*The League of Women Voters of New Mexico supports a strong state resource conservation policy. The state should provide leadership, set a public example in its operations, develop and enforce regulations promoting conservation, and actively educate its citizens.*

There is general agreement that water is a scarce resource in New Mexico, meaning that there is a structural imbalance between an uncertain and variable supply and increasing demand. Taking conservation seriously implies confronting the physical limitations of our water resources that would have immediate implications for the bottom lines of developers, growth-oriented communities, agriculture, and other major sectors of our economy. So there is still a strong official bias favoring supply-side solutions over demand management: building more diversion projects, tapping deep aquifers, transferring water out of agriculture.

Beyond the physical limitations, there are many social, political and legal issues that shape people's attitudes towards conservation. There is conflict between the view that access to water is a fundamental human right and economic theory that asserts that markets are the best way to deal with scarce resources, including water. Conflict is inherent between policies that exhort holders of existing water rights to use water more efficiently and policies that promote continuing population and economic growth. There is a conflict between the fundamental beliefs of those for whom a healthy ecosystem is essential to support human existence in the future and those who hold that technology and human ingenuity will be the most important determinants of our future well-being. There are legal conflicts between those for whom water rights are intimately tied to the preservation of a traditional way of life or to local food security and those who believe that some of those rights must be disassociated from the land in order to support inevitable population growth in urban areas. There is intergenerational conflict because the principal beneficiaries of conservation today will be future generations of New Mexicans. And, more concretely, there is interstate conflict: Texas, which has already successfully sued New Mexico over the Pecos River Compact, has threatened litigation involving the waters of the Rio Grande.

Current residents of New Mexico may reasonably ask why we should sacrifice and use less water for the benefit of individuals or institutions with whose aims we disagree. Within the League are there areas of agreement about the goals that should be served by conservation? Potential goals include: reducing net depletion; enabling compact obligations to be met; relieving stress on the physical system; improving agricultural efficiency to increase productivity or to see the excess; allowing for economic growth.

What steps should our state and local governments take to accomplish our conservation goals? Should they develop incentives to align private and public goals? Require a binding water budget process with public participation? Invest in the development of accurate data to inform the water budget process? Are there other actions that could achieve the objectives?

**LWVNM WATER STUDY  
Consensus Questions**

Check  $\checkmark$ :    **1 for Essential**        **2 for Important**        **3 for Not Important**        **4 Exclude**

**Question: What elements of “public welfare” are most important?**

1	2	3	4	<b>Sustainable long-term use</b>
				Manage aquifers for sustainable yield
				Create and follow water budgets that balance use with renewable supply
				Minimize contamination to promote human health and safety
				Encourage conservation and efficiency of use
				Discourage waste and impractical or unreasonable uses of water
				Promote flood control
				Use Lower-quality water (e.g., reprocessed water) where possible
				Consider long-term as well as short-term consequences of development proposals
				Consider alternative uses that could be precluded by proposals
				Keep options open for future generations
				<b>Economics</b>
				Consider impact of any transfer on area of origin of water rights
				Promote local/regional food security
				Use water for economic applications with highest return
				Allocate water according to ability to pay
				Allow for growth in residential development
				Allow for growth in commercial development
				Encourage water-efficient residential/commercial landscaping
				Encourage urban/suburban agriculture
				Encourage recreational tourism

Check √: 1 for Essential 2 for Important 3 for Not Important 4 Exclude

**Question: What elements of “public welfare” are most important (Continued)**

1	2	3	4	<b>Culture</b>
				Maintain traditional rural and agricultural economics
				Recognize communal water rights (e.g., acequia associations)
				Recognize senior water rights of Native American and Hispanic communities
				Preserve areas having spiritual value
				Preserve areas having aesthetic value
				Encourage non-consumptive sports such as cross-country, skiing, kayaking
				Provide sports fields and public parks in urban areas
				Preserve public lands, water, and open space
				<b>Ecological Considerations</b>
				Preserve ecological critical habitats such as riparian ecosystems
				Preserve intact ecological units for scientific study
				Assure minimum stream flows
				Minimize contamination to preserve biability of non-human species
				Preserve fish and wildlife habitat
				Maintain ecological services (e.g., water storage/purification)
				Maintain/increase biodiversity
				Preserve/restore watersheds
				<b>Management and Decision Making</b>
				Reserve water for foreseeable alternative uses
				Monitor/measure all water resources and use
				Budget sufficient water to ensure general ecological health
				Use a public water budget process
				Inform public about capacity and condition of water resources
				Educate citizens about responsibilities as well as rights

Check  $\checkmark$ : 1 for Essential 2 for Important 3 for Not Important 4 Exclude

Question: What should be the role of regional water planning?

1	2	3	4	
				Provide a vision for the future
				Gather and publish data on supply and demand
				Provide regular updates of water supply and demand
				Identify critical and emerging issues
				Create a balanced water budget
				Identify renewable sources of water to reduce groundwater depletion
				Protect regional water interests
				Protect the watershed
				Prioritize uses to serve public welfare
				Prioritize uses to serve economic development
				Evaluate the long-term impacts of development plans
				Require local land use plans to be consistent with regional water plans
				Provide a basis for collaboration with neighboring regions
				Provide a foundation for the state water plan
				Serve as guidance to the State Engineer when considering public welfare
				Require the State Engineer to consider regional definition of public welfare
				Provide a legal basis for contesting decisions of planning authorities

Check  $\sqrt{\quad}$ : 1 for Essential 2 for Important 3 for Not Important 4 Exclude

**Question: How should land use be tied to water availability?**

1	2	3	4	
				Maintain the status quo
				Make compliance with OSE determinations under the subdivisions Acct mandatory
				Expand the Subdivision Act to cover all developments
				Require proposed developments to acquire water rights before permitting
				Increase regulation and/or monitoring of domestic wells
				Update local zoning and subdivision statutes
				Require permitting authority to evaluate impact of proposed development on public welfare as defined by applicable regional water plan(s)
				Impose a moratorium on new development pending adjudication of water rights in region
				Limit or ban growth where water is not available
				Require that proposed development projects assess the impact of development on water use by existing communities and industry

Check  $\sqrt{\quad}$ : 1 for Essential 2 for Important 3 for Not Important 4 Exclude

**Question: Why Conserve Water?**

1	2	3	4	Why conserve water?
				Meet Rio Grande Compact obligations
				Help balance use with renewable supply (long-term sustainability)
				Compensate for potential reduction in supply due to climate change
				Use only our share so that everyone's basic needs can be met
				Allow more water to support ecosystems
				Increase local food security by improving agricultural practices
				Allow for growth in export-oriented industry
				Ensure that there will be enough for the next generation of New Mexicans
				Allow for natural growth in population and supporting economy
				Allow for immigration from out-of-state and associated economic growth
				Continue traditional rural way of life of long-standing populations
				Allow for growth in urban areas due to internal migration from rural areas
				<b>What is the role of government in promoting conservation?</b>
				Maximize water conservation in own operations
				Educate citizens
				Develop and disseminate data about water resources
				Promulgate and enforce regulations promoting conservation
				Provide positive incentives to promote conservation
				Set rate structures that promote conservation
				Develop urban systems to maximize water reuse
				Develop methods to store water that do not lose so much to evaporation
				Identify public goals for water management
				Enable public to participate in setting goals for water management