Technical and Physical Feasibility Fact Sheet
Alternative 67: Water Authority/Banking

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1. Definition of Alternative

A-67: Establish a regional water management authority to provide professional water resource management and to administer or assist in a water banking program.

2. Summary of Alternative Analysis

This alternative encompasses the general question of the powers, duties and functioning of regional management entity and specifically within such an entity the creation and operation of a regional water bank.

The key issue is the scope of a regional water authority's operations and powers. Some of the competing models are: (1) a regional planning and coordination organization that does not itself assert jurisdiction over water use, but works with and for the existing local governments; (2) a regional water utility that would supply water and would assert jurisdiction and regulation over municipal, industrial and domestic water use, including imposing water conservation requirements; (3) a regional land use authority; and (4) a regional water management and regulatory authority that engages in some level of water rights administration, at least in part currently performed by the State Engineer, and whose water administration function could include water banking.

All four models are legally feasible to varying decrees. A regional coordinator and planner exists already in the form of the Mid-Region Council of Governments. Either a regional utility or land use authority could be created under existing law by agreement among local governments, most likely in the form of a Joint Powers Agreement. Alternatively, although state law authorizes a number of multi-jurisdictional water suppliers, a change in state law could be

required to address the diverse and complex interests of the Middle Rio Grande. Finally, formation of a regional water rights manager and administrator would likely require a change in state law, defining the role and functioning of such an entity vis-a-vis the Office of the State Engineer. Such authority could be limited to overseeing and reporting to the State Engineer on the operations of a regional water bank.

2.1 Regional Entities

Planner and Coordinator. A less ambitious form of regional organization is found in the regional coordinator and planner. Such an entity works for and between existing local governments. It serves to coordinate and plan policies affecting its member governments and institutions, to facilitate inter-jurisdictional cooperation and to provide information and services to members. Such services may include not only water planning but also preparation of integrated land use polices that link land development to water supply, as discussed in the fact sheet for A-30, *Land Use*. The Mid-Region Council of Governments (MRCOG) currently serves that role. Although MRCOG is facilitating regional water planning, it does not have the authority or resources to become a regional water utility or a regional water rights administrator.

Regional water utility. Current state law provides three or four mechanisms for formation of a multi-jurisdictional water supplier. First, water and sanitation districts may be created to supply water to the public within the district for domestic, commercial and industrial uses, and to provide sanitary sewers or sewage disposal systems.[1] A district may be created within or partly within one or more counties, providing that the areas of the district lying in two or more counties are contiguous with one another.[2] Districts have the power to purchase, acquire, establish or construct waterworks necessary to the provision of water, including the power to extend water lines outside of the district to secure water for the state, Indian reservations or federal lands.[3] Moreover, water and sanitation districts have the power of eminent domain.[4]

Second, New Mexico counties and municipalities may jointly create metropolitan water boards to supply water. Metropolitan water boards are regulated like municipal water utilities.[5] They have the power to contract for, lease or sublease any supply of water for municipal, domestic or industrial purposes which the municipality and the county in combination with any other public or private entity may receive from the U.S. Bureau of Reclamation.[6] Boards have the same power of condemnation to acquire and operate water facilities as municipalities.[7] Until 1995, the City and County of Santa Fe operated a metropolitan water board but then disbanded it.

Third, the Joint Powers Agreements Act (JPA Act)[8] authorizes public agencies to enter into agreements with other public agencies.[9] "Public agencies" include the federal government or any federal department, agency or instrumentality; the state, an adjoining state or any state department, agency or instrumentality; an Indian Nation, Tribe or Pueblo; a subdivision of an Indian Nation, Tribe or Pueblo that has authority pursuant to the law of that Indian Nation, Tribe or Pueblo to enter into joint powers agreements directly with the state; a county, municipality, public corporation or public district of this state or an adjoining state; a New Mexico educational institution and a New Mexico school district. Under the Act, two or more public agencies, by agreement, may jointly exercise any power that the agencies have in common.[10]

The only example in the Middle Rio Grande of a regional utility is the Albuquerque Metropolitan Water and Wastewater Authority created in 2000 by JPA by the City of Albuquerque, Bernalillo County and the Village of Los Ranchos to provide domestic water and waste water services to the developed areas of unincorporated Bernalillo County, to the city and to the Village, and to allow the three participants to jointly exercise their powers to operate and set rates for water and waste water utilities.

The last potential vehicle under state law for supplying regional municipal, industrial and domestic water is found in the Conservancy Act. Although historically devoted to irrigation, the purposes of a conservancy district can be broad, consistent with the "public health, safety, convenience, and welfare."[11] "Public welfare" includes acts or things that tend to improve or benefit the general public or the inhabitants of the district.[12] In particular, the Conservancy Act requires conservancy districts to give first preference to domestic and municipal water supplies. Second in preference is water for irrigation, manufacturing, for the production of steam, for refrigerating, cooling, condensing, and for maintaining sanitary conditions of stream flow. Third in preference is water for power development, recreation, fisheries, and other uses.

Finally, federal law can provide the authority for formation of regional water suppliers. Many of the planned and operational regional water supply projects in New Mexico are sponsored and authorized by the federal government, including the San Juan-Chama Project. This sponsorship can take a variety of forms, including the financing of a project, project planning and feasibility studies, and creation of environmental impact statements. Most projects involve collaboration with state and local entities. This collaboration may include the establishment of joint powers agreements between the non-federal agencies, and may encompass various state and local regional water supply entities. Usually, water under such a project is supplied

pursuant to a water supply or repayment contract between the government and the local user or users group. Especially where Indian Tribes are part of a regional authority, a federally approved supply entity may be necessary.

A regional utility could be created under existing law by agreement among local governments, most likely in the form of a Joint Powers Agreement.

Regional land use authority. A regional organization could also be established with the charge of assuring that land development and use are backed by a reliable water supply. A Joint Powers Agreement among local governments would be the most likely vehicle for creating such an authority. It could adopt policies, or perhaps even binding rules: (1) requiring linkages between water management and land use plans, such as policies requiring higher densities, conservation, xeriscaping, storm water management, and reuse; (2) imposing development fees that reflect the cost of water; (3) requiring proponents of land uses requiring additional water to acquire the commensurate water rights; and (4) using transfer of development rights to protect hydrogeologically sensitive areas.

Regional water authority. Finally, formation of a regional water rights manager and administrator would likely require a change in state law, defining the role and functioning of such an entity vis-a-vis the Office of the State Engineer. Such authority could be limited to overseeing and reporting to the State Engineer on the operations of a regional water bank.

Under New Mexico law the State Engineer is charged with "the supervision of waters of the State and of the measurement, appropriation, distribution thereof[13] . . . [a]ccording to the licenses issued by him and the adjudications of the courts."[14] He can "adopt regulations and codes to implement and enforce any provision of any law administered by him . . . to aid him in the accomplishment of his duties . . .."[15] The State Engineer must approve all new appropriations of water as well as changes in the point of diversion and/or changes in the place and/or purpose of use of an existing water right, commonly referred to as a "transfer."[16] The State Engineer also has statutory enforcement powers.[17]

Given the State Engineer's plenary powers, a region might desire to further regulate water use where a specific regional goal is identified that is not met by existing State Engineer administration. One current example is the regulation of domestic wells, where the State

Engineer explicitly allows local governments to impose tighter restrictions on new domestic well permits. A potential example is the creation of regional water banks that would allow for speedier reallocation of water than occurs under the current transfer process. Such a bank could be operated and administered by a regional water authority. As discussed below, a change in state law is necessary to clearly define and authorize regional water banking.

2.2 Water Banking

Description of water banking. Water banking generally refers to a means of reallocating or transferring the use of water through some kind of centralized management entity. Rather than trying to find buyers or lessees for a particular water right, water rights holders "deposit" their water right in a "bank," which then leases the water right to a third party. The water rights holder is protected from forfeiture of the water right and benefits from revenues obtained for use of the water by a third party. For example, a farmer could deposit his or her water right in a local water bank (run by an irrigation or conservancy district, by the State Engineer or by some other stated-created entity). Simultaneously, water users in need of additional water rights could apply to the water bank to lease water for a specific period of time and use. Using databases and other management tools, the water bank would be able to match the amount and location of the farmer's deposits with appropriate users and then set up leases with those users to reallocate the farmer's water rights deposited with the bank. The farmer would then cease irrigating the land appurtenant to those water rights.

In the West, water banking is increasingly used for allocation of scarce water resources. Texas, Arizona, and Idaho, among others, all have state water banking statutes and operational water banks. Many times, water banking serves as a transfer mechanism from agricultural water use (where water is available) to urban water uses (where water is in demand). Alternatively, water banks are used as a management tool to address drought. For example, the state of California has set up the California Drought Water Bank. A great advantage of the California water bank is the ease with which water can be withdrawn, especially in times of drought.

Legal status of water banking. Currently there is no specific water banking law that allows for creation of regional water banks in the Middle Valley. In the 2002 legislative session, the Legislature enacted water banking legislation for the Lower Pecos River and undoubtedly will consider extending the authorization for water banking to the rest of the state. At the last meeting of the Interim Water and Natural Resources Committee on November 7, 2002, Senator

Sue Wilson presented a one-page conceptual outline of proposed legislation and has indicated she may introduce water banking legislation.

Under current law, water reallocation will be administered by the State Engineer and managed by water distributing entities, such as acéquias and conservancy districts. Under Chapter 72, the State Engineer will continue to permit changes in point of diversion and place and purpose of use pursuant to the transfer statutes, NMSA 1978 §§ 72-5-23 and 72-12-7, and under the leasing statute, Chapter 72, Article 6.

One statutory provision that helps encourage but does not specifically provide for water banking is the statutory exemption that allows certain water rights to go unused without being subject to forfeiture. This statute, NMSA 1978 §72-5-28(G) provides that periods of non-use when water rights are acquired and placed in an OSE-approved water conservation program—by an individual, acéquia or community ditch association, conservancy district, irrigation district, soil and conservation district, or the Interstate Stream Commission—shall not be computed as part of the four-year statutory forfeiture period. This statute, however, does not provide for expedited reallocation procedures.

In addition, conservancy districts may reallocate water within their boundaries consistent with the Conservancy Act, NMSA 1978, Chapter 73, Articles 14-17. The Conservancy Act allows conservancy districts to provide water that is not needed for irrigation to other users by contract or other agreement for compensation.[18] The Act provides that "persons, public corporations, or others" who wish to use district water may apply to the Board for permission to lease or purchase water.[19]

At this time, the only existing “water bank” to speak of in the Middle Valley was established by the Middle Rio Grande Conservancy District in 1995, when the MRGCD Board adopted Rule 23, the Water Bank Rule. The Water Bank is essentially a water management system and a method by which the MRGCD manages the distribution of water within its boundaries by moving water from areas where it is not being used to areas of need. In this way, the MRGCD can maximize the beneficial use of water. The bank is limited in that to date the State Engineer has taken the position that water reallocated by change in point of diversion or to a place of use outside of the District boundaries is not authorized by the Conservancy Act and requires a State Engineer permit. The State Engineer has also taken the position that the quantity of vested

water rights in the bank cannot be calculated until the State Engineer determines total beneficial use of MRGCD water.

In general, because no rights in the Middle Valley are adjudicated, the key issue will be establishing an expedited process for approving deposits into the water bank. Before delegating any authority to the bank, the State Engineer will insist on a process that protects existing rights and does not reduce New Mexico's deliveries under the Rio Grande Compact.

3. Alternative Evaluation

3.1 Technical Feasibility

The primary issues determining the feasibility of water banking are the financial feasibility, legal feasibility, and socioeconomic impacts resulting from the transfer of water among users. The primary technical issue with establishing a water bank that serves users across different hydrologic systems is the determination of how potential impairment will be evaluated and/or monitored and still allow the transfers to occur in a timely manner.

Enabling New Technologies and Status

Regional water authority. A regional water authority, which could include a water banking function, would require the establishment of a new administrative agency with the various functions discussed in this alternative. Changes in state law would be required as well as the drafting of regulations for the new agency. Technical issues associated with water banking are discussed above.

Water banking. Technical considerations associated with this alternative center on the ability to physically transfer water from one or more points of diversion or places of use to other locations. Potential transfers of water are easier if the recipient has an operational diversion structure from the same hydrologic system as the original water use. Thus, water banking within irrigation and conservancy districts, with their limited geographical extent and shared distribution system, will generally not encounter any significant technical issues. When water is transferred over a greater distance, such as from an irrigation district or acéquia to a more distant urban area, not only is there a potential problem with physically obtaining the water, but the issue of impairment arises as well. New Mexico water law requires that transfers of water do not impair existing

users. When transfers of water are made, protestants and the OSE may conduct technical analyses, including modeling, to evaluate the impact on other water.

Infrastructure Development Requirements

Water banking. An administrative water bank would require few, if any, large infrastructure costs. Costs will increase significantly if additional diversion structures or storage facilities are needed.

Total Time to Implement

Given the numerous legal changes required, it may take several years to draft authorizing legislation to implement this alternative. For example, water banking legislation already has been introduced in several legislative sessions with no or marginal success. Once the state law is enacted and necessary funds appropriated, it could take up to a year to set up the agency, train staff and fully implement all agency programs.

3.1.1 Physical and Hydrological Impacts

Effect on Water Demand

As proposed in this analysis, a regional water authority would have broad legal authority over water or matters that can affect water demand (land use planning). The purpose of the authority is to improve water management, which would include development and implementation of measures or programs designed to reduce water demand and improve water supply operation flexibility and management.

Effect on Water Supply (surface and groundwater)

See above.

Water Saved/Lost (consumption and depletions)

Reductions in demand due to elimination of a percentage of high water use landscaping would reduce depletions in the region. Other measures described in other fact sheets could diminish depletions through reduction of incidental losses or evaporation or evapotranspiration (see fact sheets for A-18, A-28, A-1, A-66, A-7, A-9, & A-10.)

Impacts to Water Quality (and mitigations)

Land use policies could be designed to protect aquifer recharge zones and sensitive areas and to establish wellhead protection areas.

Watershed/Geologic Impacts

None.

3.1.2 Environmental Impacts

Impact to Ecosystems

Depending on legal and administrative limitations, a reduction in depletions could make more water available for other uses. Such water, if legally available, could be used for measures to improve ecosystem health.

Implications to Endangered Species

Depending on legal and administrative limitations, a reduction in depletions could make more water available for other uses. Such water, if legally available, could be used for measures to improve endangered species habitat.

3.2 Financial Feasibility

3.2.1 Initial Cost to Implement

A cost per acre foot of water saved cannot be determined for this alternative without further hydrologic studies to determine an actual amount of water that could be saved or cost studies.

Regional water authority. Cost associated with changes in state law are difficult to quantify. It would depend on the number of individuals involved in drafting new legislation, lobbying for such legislation and the numerous activities associated with the legislative process.

Once a state agency were created, then the costs associated with this alternative would be the up front costs (purchase or lease of facilities, equipment, software, as well as time to hire and train staff).

Water bank. Establishing a water bank, either within the OSE or by creating an entity with the legal authority to manage the water bank, will require startup funding as well as funds for annual

operational costs, including salaries and equipment. Startup costs also include public and stakeholder participation to define the bank's mandate and powers and to obtain technical expertise adequate to assess the effects of proposed transfers in the region in which the bank operates.

3.2.2 Potential Funding Source

Regional water authority. Funding sources for a regional organization, whether serving as planner/coordinator, regional utility, land use authority or water manager are readily identifiable. If authorized by law, the entity may derive its revenues from customers or user fees or by local taxation or issuance of bonds. Otherwise, it must look to the local member governments it represents to pay an allocated shared of its costs of operation. Under the JPA Act, a JPA may include provisions for the contribution of funds from the participating public agencies, the payment of public funds to defray the cost of the agreement, and advances of funds and repayment of advances from participating agencies.[20] The agreement may also provide that funds be paid to and disbursed by the agency agreed upon by the public agencies under the terms of the agreement.[21] The agreement must provide for strict accountability of all receipts and disbursements,[22] as well as provide for the disposition, division or distribution of any property acquired as the result of the joint exercise of powers.[23]

Water bank. Given the high price for water in the region (currently estimated at a one-time purchase price of $5,000), it may be possible to generate sufficient revenues through fees and costs imposed on the water transactions managed by the water bank. Two types of fees could be structured: (1) annual membership fees to participate in the bank (membership would confer voting privileges regarding bank policies), and (2) specific fees levied when transactions occur. Should the region choose to pursue creation of a water bank within the OSE, a legislative initiative to increase the OSE budget may be one way to cover the cost of the program.

3.2.3 Ongoing Cost for Operation and Maintenance

Regional water authority. Ongoing operations and maintenance costs would be included in the annual budget for the authority. One factor that greatly influences the cost of an administrative agency is the number of employees and employee salaries. Assuming the regional water authority employed 100 people, the annual budget could range from $4 to $6 million per year.[24]

Water bank. If the water bank were not incorporated into the regional water authority, it would require approximately 10 to 15 employees to operate. An agency with this number of employees could have an annual budget of $600,000 to $900,000.

For water purchases, informational costs often are borne by the buyer and/or seller. However, for temporary transactions, the net economic returns are not usually large enough to support sophisticated modeling and data gathering. Low costs and swift results are necessary to ensure success of a water bank. To this end, the bank will need to develop some mechanism (such as a state-of-the-art web site) that allows potential transactors to obtain information, to offer and bid for water, and to have their questions answered.

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[1] NMSA 1978 §73-21-3.

[2] NMSA 1978 §73-21-4(B).

[3] NMSA 1978 §73-21-3.

[4] NMSA 1978 §73-21-16(J).

[5] *See* Suedeen Kelly, "Water Entities in New Mexico" presentation paper, CLE International New Mexico Water Law Conference, August 1995 at 14 (on file with author); *see also* "Municipally-owned utilities" section *supra.*

[6] NMSA 1978 §3-61-1 (A).

[7] NMSA 1978 §3-61-3.1.

[8] NMSA 1978 §§ 11-1-1 to -7.

[9] *Id*.

[10] NMSA 1978 §11-1-3.

[11] NMSA 1978 § 73-14- 2.

[12] NMSA 1978 § 73-14-3(P).

[13] NMSA 1978 § 72-2-1 (1907).

[14] NMSA 1978 §72-2-9 (1907).

[15] NMSA 1978 § 72-2-8(A) (1953); State Engineer regulations may be for the purpose of "prescribing procedures and interpreting and exemplifying the statutes to which they relate." NMSA 1978 §72-2-8(B)(1) (1953).

[16] NMSA 1978 §§ 72-2-9 (1907), 72-5-1 (1907) - 72-5-39 (1965) and 72-12-7 (1931).

[17] NMSA 1978 § 72-2-18 (2001).

[18] § 73-14-47 (H).

[19] § 73-14-47(I).

[20] §11-1-4(B).

[21] §11-1-4(C).

[22] §11-1-4(D).

[23] §11-1-4(F).

[24] This estimate is based generally on the annual operating budgets of existing property tax assessor departments in the region. The assumed baseline cost is an agency with 25 employees has an annual budget of $1.5M per year. This number can vary depending on the salaries of the employees and the nature of the work conducted. Therefore, the costs are provided as a range for illustration purposes.