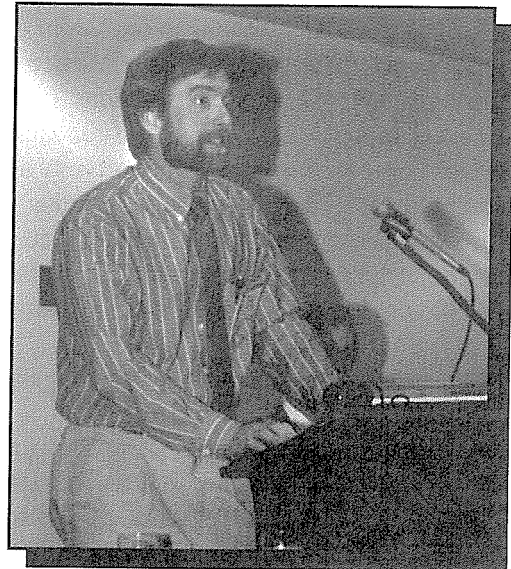


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## WATER RIGHTS CONSIDERATIONS REGARDING CONJUNCTIVE USE OF SURFACE WATER AND GROUNDWATER IN NEW MEXICO

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### INTRODUCTION

Urban areas in New Mexico and other western states are seeking more efficient ways of meeting growing water demands with limited water supplies. Conjunctive use is a water management practice which combines dissimilar types of water resources, usually to maximize the net benefits from them over time. In fully developed conjunctive use systems, all available water sources and storage capacity, including underground storage capacity are managed to increase the yield, reliability of supply, and general efficiency of a water-supply system. Substantial literature exists on the engineering and economic aspects of conjunctive use, however, the legal feasibility of a conjunctive use system depends on the water rights administration system governing the use of surface water and groundwater. This paper exam-

ines water rights considerations of conjunctive use in New Mexico.

### OVERVIEW OF WATER RIGHTS ADMINISTRATION IN NEW MEXICO

An overview of water rights administration in New Mexico is essential to understanding the water rights considerations of conjunctive use. Water resources in New Mexico are administered by the State Engineer, according to provisions of the state constitution and statutes, adjudication of the courts, interstate water compacts and the rules and regulations of the State Engineer. Waters of the state belong to the public, subject to appropriation under the doctrine of prior appropriation, a time priority system in which senior rights are superior to junior rights. Beneficial use is the basis, the measure, and the limit to the right to use public waters.

The permit system provides for public knowledge regarding water rights applications through a public notice requirement. With the exception of domestic well permits under §72-12-1 New Mexico Statutes Annotated (NMSA), all applications require the applicant to advertise the intent of the application. The public is so advised of the opportunity to protest the application based on specific reasons why the granting of the application will impair their existing water right, be detrimental to the public welfare of the state or contrary to the conservation of water within the state.

New Mexico's permit system regulates the development and use of water so that it is used beneficially. Approved permits to appropriate require the permittee to apply water to beneficial use within four years of the date the permit is issued. If the appropriator fails to use all or any part of the permitted amount of water, there is a risk of forfeiture of the unused portion. New Mexico's forfeiture statute (§ 72-5-28 NMSA) states that: "such unused water shall, if the failure to use water persists one year after notice and declaration of nonuser given by the State Engineer, revert to the public and shall be regarded as unappropriated public water." Forfeiture of water rights rarely occurs, however, because appropriators who fail to use water may apply for extensions of time for a period between one and three years.

In addition to extensions of time, New Mexico water law contains a statute that enables major water providers to protect themselves from forfeiture. Municipalities, counties, state universities, and public utilities supplying water to municipalities may acquire water rights and not exercise the rights for their "reasonable needs" within a 40-year period (§ 72-1-9 NMSA). These users must submit a 40-year plan to the State Engineer with their applications for new appropriations. If the State Engineer determines that the plan is reasonable and the application to appropriate is approved, the permittee may acquire and develop surface and groundwater rights for the future.

#### Surface Water Rights

The administration of surface water is governed by Article 5 of Chapter 72 of the New Mexico Statutes, 1978. This article provides, in effect, that

after March 19, 1907, there can be no new appropriation of surface waters, or any change in point of diversion, place or purpose of use of a water right without a permit from the State Engineer. Inasmuch as most surface waters in New Mexico are considered fully appropriated, most new surface water appropriations must result from the transfer of an existing surface water right.

Additionally, many rivers flowing through New Mexico are subject to interstate water law based upon eight compacts between states and one decree entered by the U.S. Supreme Court. On eight interstate streams (Rio Grande, Colorado, Upper Colorado, Pecos, Canadian, Costilla, La Plata, and Animas-La Plata Project), New Mexico must comply with specific compact obligations. Furthermore, the Rio Grande and Colorado rivers are subject to international treaty obligations.

#### Groundwater Rights

Groundwater rights are administered through Article 12 of Chapter 72 of the New Mexico Statutes, which contains procedures similar to the surface water statutes. A major difference is that a permit to drill a well and appropriate water is not required in areas outside the administrative boundaries of groundwater basins declared by order of the State Engineer. Appropriations from wells drilled prior to the date the basin was declared are not subject to the rules and regulations of the State Engineer. Presently, there are 32 declared underground water basins encompassing about 102,600 square miles, about 84% of New Mexico.

#### Conjunctive Administration of Water Rights

New Mexico coordinates the administration of groundwater diversions from wells and diversions from surface water works in order to protect valid in-state water rights and deliver water to other states as required by interstate water compacts. Thus, where there is an intrinsic relationship between groundwater occurrence and streamflow, and diversions from groundwater sources are assumed to affect surface water sources, water rights are administered conjunctively, with groundwater appropriations subject to offsetting the effects on the stream.

In 1962, in a case known as *City of Albuquerque v. Reynolds*, the New Mexico Supreme Court recognized the statutory authority of the State Engineer to conjunctively administer hydrologically connected surface and groundwater. The State Engineer denied an application by the City to appropriate water from wells in the Rio Grande Underground Water Basin. The court decision required the City to acquire surface rights and retire them from use to offset the effects on the river presumed to result from the proposed groundwater use.

Transferred Water Rights. Offsetting stream effects can be done by retiring and transferring vested water rights in the basin. Transfers of water rights are administered through applications to change point of diversion and place and purpose of use. In the Middle Rio Grande Basin, a typical water rights transfer involves a change in point of diversion from a surface source to a well, and a change in purpose of use from irrigation to municipal or industrial use.

Dedicated Water Rights. Until 1994, the State Engineer allowed a practice called the dedication of water rights for purposes of offsetting the effects of groundwater pumping on a stream. A dedicated water right is a valid existing water right which has been withdrawn from the exercise of the right, but not severed from its appurtenant land. Dedicated lands cannot be irrigated until the dedication is withdrawn. Due to legal concerns about dedications being accepted without public notice and opportunity for objection or protest, on June 23, 1994, the State Engineer imposed a moratorium on new dedications, and current State Engineer Office policy does not allow new dedications. All dedications accepted before the moratorium remain in effect until they are withdrawn.

Return Flow Credits. Return flow credits are a means by which an appropriator may increase his permitted diversion by some percentage amount of water if he can demonstrate that the requested percentage amount is returned to the hydrologic system from which the water was withdrawn. For example, if an appropriator has a permitted diversion and consumptive use amount of 12 acre-feet of water per annum,

and return flow credit of 50% is granted, the appropriator may increase the permitted diversion from 12 acre-feet per annum to 24 acre-feet per annum.

## CONJUNCTIVE USE UNDER NEW MEXICO WATER LAW

Under New Mexico water law and its system of conjunctive administration of surface and groundwater, conjunctive use can be accomplished in several ways. An example of the linkage between conjunctive administration and conjunctive use is an individual holding rights to irrigate with surface water from a ditch who also uses groundwater as a supplemental source. In this situation, a permit to change partial point of diversion is required, rather than a separate permit to appropriate groundwater. If the permit is approved, water may be diverted from a well supplemental to surface waters during times when surface water is not available. Inasmuch as the groundwater diversion is connected to the surface water right, the groundwater diversion is limited by the historical surface water supply. For example, if the historical supply of the stream system is 80% of that required to irrigate all lands with surface water rights, the acreage allowed to be irrigated by the supplemental well will be reduced accordingly.

Some large water providers in New Mexico may practice conjunctive use because they have vested surface water and groundwater rights. These communities may withdraw water from both sources as allowed by each permit. As mentioned earlier, large water providers may protect unused water from forfeiture if they submit an acceptable 40-year plan with their application. This provision may give the permittee enough water rights flexibility to use varying amounts of surface water and groundwater, both seasonally and annually. Without the 40-year plan exemption, opportunities for conjunctive use could be more limited because the user would be under pressure to develop and perfect its permitted water rights. A water provider with rights to both surface water and groundwater could thus benefit from conjunctive use by using the renewable source to the fullest extent possible, and use the non-renewable source more as a backup or reserve supply.

This type of conjunctive management is practiced by the City of Santa Fe.

#### Adding Surface Water to a Groundwater System

Most cities in New Mexico rely almost entirely on groundwater, which means that most future conjunctive use will require the addition of surface water to the system. Because there is very little unappropriated surface water remaining in New Mexico, incorporating surface water into a water supply system will require either the transfer of existing surface water rights or the use of contract surface water. In central New Mexico, one of the major sources of contract water is from the San Juan-Chama Diversion Project, a U.S. Bureau of Reclamation project which diverts water from the Colorado River Basin to the Rio Grande Basin. Cities, irrigation districts, and other entities may use a combined total of up to 96,200 acre-feet of water per year.

The City of Albuquerque is the largest contract holder with 48,200 acre-feet per year. The city currently has adequate groundwater and surface water rights, such that it does not need its San Juan-Chama water to offset its groundwater diversions. Rather, the City is pursuing the direct diversion and use of its San Juan-Chama water, both to protect its allocation of this water and to use this renewable source.

Other than the well supplemental to surface water permit, New Mexico water law does not contain any provisions for conjunctive use. The beneficial use basis for either a surface water or groundwater right precludes much of the flexibility that would be necessary for a conjunctive use situation. The economic benefits of conjunctive use are realized by using less than the permitted amount of groundwater in a wet year.

Another element of a conjunctive use system that is being considered by Alamogordo, Albuquerque, and other cities is an "aquifer storage and recovery" operation in which an aquifer is recharged with surface water when a surplus is available, and water is stored in the aquifer until needed during the low-flow season or drought period. Currently, there are no provisions in New Mexico water law that would allow a water provider to do this. Under New Mexico law, water reverts back to the public if it is used to artificially recharge an aquifer.

Water reuse may also be an element of a conjunctive use system. Under New Mexico's conjunctive administration system, a new permit would not be required for water reuse if the reclaimed water was used within the service area of the water provider. However, if the water provider had return flow credit, this credit would be reduced if the reclaimed water was formerly part of the water returned to the system and claimed as part of the return flow credit.

#### CONCLUSION

In conclusion, New Mexico's water rights system contains both opportunities and constraints for the conjunctive use of surface water and groundwater. Under New Mexico law, a permit from the State Engineer Office to appropriate or transfer water is usually required before a water user holding the rights to use water from either a surface water or groundwater source may begin to use water withdrawn from another point of diversion or water source. As mentioned earlier, some surface water right holders wanting to use a well to supplement surface water may obtain a permit to change partial point of diversion, rather than a permit to appropriate groundwater. For many water providers, water reuse may be possible without a separate permit, however, opportunities and incentives for aquifer storage and recovery projects are limited because it is not currently possible to retain the rights to appropriated water that is subsequently recharged into the aquifer.