Appendix D

Legal Documents
Appendix D1

Overview of Water Law
Applicable to this Region of New Mexico
Overview of Water Law Applicable to This Region of New Mexico

Jemez y Sangre Regional Water Planning Council
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### Overview of Water Law Applicable to This Region of New Mexico

#### Table of Contents

I. Introduction .................................................................................................................. 1

II. New Mexico Water Law ........................................................................................... 1
   A. Prior Appropriation and Beneficial Use ................................................................. 1
   B. Administration of Water Rights ............................................................................ 4
   C. Appropriation and Transfer of Water Rights and State Permitted Uses ............ 5
      1. Appropriation ...................................................................................................... 5
      2. Transfer ............................................................................................................... 7
      3. Supplemental and Replacement Wells ................................................................. 8
         a. Replacement well over one hundred feet from original well ......................... 8
         b. Replacement well within one hundred feet of original well ......................... 8
         c. Supplemental Well ......................................................................................... 8
      4. Change of Ownership ......................................................................................... 9

D. Other State Agencies Addressing Water Rights ...................................................... 9
   1. Traditional Entities ............................................................................................... 9
      a. Acéquias and Community Ditch Associations ................................................. 9
      b. Cooperative and Mutual Domestic Water Associations ............................... 11
   2. Organizations of the Twentieth Century ............................................................ 13
      a. Irrigation Districts ............................................................................................ 14
      b. Conservancy Districts ..................................................................................... 15

E. Water Rights Adjudications ..................................................................................... 17

F. Local and Regional Water Planning ....................................................................... 18

G. Water Project Finance Act ...................................................................................... 18

III. Pueblo Water Rights ............................................................................................... 19
   A. Pueblo Rights Arise Independent from State Allocation Law, State Regulation and State Administration ................................................................. 19
   B. Pueblo Aboriginal Rights ....................................................................................... 21
      1. Historically Irrigated Acreage - Ditch Rights .................................................. 22
         a. Quantity ......................................................................................................... 22
         b. Priority .......................................................................................................... 22
      2. Stock-watering .................................................................................................. 23
      3. Domestic (Municipal) Use. ................................................................................. 23
      4. Other Aboriginal Uses ...................................................................................... 24
   C. The Pueblos’ Federally Reserved Water Rights .................................................. 24
   D. State Law Rights .................................................................................................. 25

-i-
IV. Rights under Federal Law .................................................. 25
   A. Reserved Water Rights for Other Federal Purposes ............. 25
   B. The Endangered Species Act ...................................... 26
   C. The National Environmental Policy Act ......................... 27
   D. Other Federal Laws .................................................. 29

V. San Juan-Chama Project .................................................. 29

VI. City and County Regulation of Water Use ............................ 30

VII. Interstate Compacts ..................................................... 32

VIII. Water Quality Law ..................................................... 33
    A. The Clean Water Act ............................................. 33
    B. Other Federal Laws .............................................. 35
       1. The Safe Drinking Water Act ................................. 35
       2. The Resource Conservation and Recovery Act .............. 36
       3. The Comprehensive Environmental Response, Compensation
          and Liability Act ............................................. 36
    C. Groundwater Standards and Regulations ....................... 37
I. Introduction

Within the Jemez y Sangre Water Planning Region (Figure 1), a variety of federal, state, county, and tribal laws and regulations govern the use of water. An overview of each of these areas of law is necessary in understanding the Council's water planning efforts.

II. New Mexico Water Law

A. Prior Appropriation and Beneficial Use

The State of New Mexico, like most western states, uses the doctrine of prior appropriation to allocate water use. This doctrine has these essential principles: (1) the first user (appropriator) in time has the right to take and use water; and (2) that right continues as against subsequent users so long as the appropriator puts the water to beneficial use.  

New Mexico's Constitution recognizes beneficial use as the basis, the measure, and the limit of the right to use water. Beneficial use means application of water to a lawful purpose that is useful to the appropriator and at the same time is a use consistent with the general public interest.

The prior appropriation doctrine is tailored to fit the geography and climate of the western United States, where water is a precious resource in scarce supply. The basic principle behind the prior appropriation doctrine is that, if a water user decides, for a variety of reasons, to stop using water, others should be able to put it to use.

An example of how this system operates may be helpful. The day a person diverts water from a stream or from the ground becomes the "priority date" of the right. More priority dates are assigned as more people use the water source. In New Mexico, water supply is often "feast or famine" and it is typical that more rights to use water exist than water supply in most years. When there is insufficient water in a stream to meet the demand, the person with the oldest water right can

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1 This discussion only discusses the principles that apply to the allocation of water, and focuses on water quantity. However, the right to use water cannot be separated from water quality issues because quality concerns will determine the quantity of water available for particular uses. Water quality laws are addressed in Section VIII, infra.


3 N.M. CONST. art. XVI, § 3.

4 Storage of water in a reservoir for future use is also recognized as a beneficial use, despite the fact that "stored water" is necessarily not being diverted.

5 The date of first beneficial use is the priority date for the right to use water where the State Engineer has no jurisdiction. Once the State Engineer has jurisdiction over a stream or basin, the priority date is the date the water user applies with the State Engineer to allow such. The State Engineer's jurisdiction will be described below.
use up to his or her full amount irrespective of geographical location. The first user's right only limits other users to the extent that the first user can actually put water to use. For practical purposes, a senior water right is a "right of first refusal" to put water to use. The fact that the first user may not be able to use their full right all the time does not destroy the right. In New Mexico, there will be times, as to some water sources, where even the senior right cannot be fully met. Once the senior right is met, the next most senior right in time may be used to its full amount, and so on. Thus, persons with the newest rights can get no water.

New Mexico codified and refined the prior appropriation doctrine in the New Mexico water code. The territorial legislature enacted the part of the code that governs the use of surface water in 1907. The code's purpose is the conservation, protection, and development of public waters of the State and their application to beneficial use. The 1907 water code expressly recognized existing surface water rights, allowing for the filing of declarations with the State Engineer stating the beneficial use of rights prior to 1907. In 1931, the Legislature extended the State water code to underground waters, declaring water in underground streams, channels, artesian basins, lakes, and reservoirs having reasonably ascertainable boundaries to be public waters subject to appropriation for beneficial use. The State Engineer has authority over groundwater uses after the Engineer declares a source to have "reasonably ascertainable boundaries." This is done one basin at a time, so the date of the beginning of State Engineer authority is different for each basin.

Most areas of the State have been declared to constitute underground water basins. In the remaining undeclared areas, however, the State Engineer has no jurisdiction over groundwater use. The New Mexico Supreme Court in State v. Mendenhall held that a person who commences drilling a well prior to declaration of an underground basin and diligently develops the water right subsequent to declaration acquires a water right with a priority date relating back to the date of commencement of drilling. Finally, the State Engineer is required to approve wells for domestic and livestock use.

The Water Code grants the State Engineer expansive authority over both surface and groundwater, but it does not give the Engineer the power to adjudicate water rights because only a court has that authority. However, water rights acquired prior to the State Engineer gaining authority, while governed by the law of prior appropriation, are free of the State Engineer's control. If they are transferred, they then become subject to the State Engineer's jurisdiction.

6 § 72-1-1 NMSA 1978 (1997 Repl.).
8 § 72-1-3 NMSA 1978 (1997 Repl.).
Because water is an incredibly important, but also incredibly scarce, resource in New Mexico, the State has a compelling interest in regulating water use. No individual owns the water.\footnote{12} However, one may acquire a real property right\footnote{13} to use water consistent with the procedures under State law,\footnote{14} up to the amount which can be put to a beneficial use.\footnote{15}

New Mexico statutes regulating water use do not define "beneficial use." The term has been construed to include irrigation and recreational fishing,\footnote{16} as well as other traditional western uses such as stock watering.\footnote{17} In 1998, the New Mexico Attorney General issued an opinion that use of water for instream flows is a beneficial use.\footnote{18}

If an appropriator stops using water beneficially for long enough, the right to use the water can be lost through forfeiture or abandonment. By statute, a water right is forfeited if the owner of the right fails to apply water to beneficial use for a period of four years and continues the non-use for one year after notice of proposed forfeiture is given by the State Engineer.\footnote{19} In addition to forfeiture, water rights can also be lost through abandonment when both the intent to abandon as well as a failure to use the water occur. Intent to abandon can be extremely difficult to prove.\footnote{20} An underlying principle of the American legal system is that the courts traditionally do not favor forfeiture or abandonment of water rights. If a court can find a reason to excuse nonuse, the court will not say the right has been forfeited or abandoned.

With adoption of the surface water code in 1907 and the groundwater code in 1931 the State took an active role in water use. Persons wanting to use water could not act without a permit to make a new appropriation or to change an existing appropriation. Only the State Engineer was given

\begin{itemize}
\item \footnotesize{See N.M. Const. art. XVI, § 2.}
\item \footnotesize{United States v. Ballard, 184 F.Supp.1 (D.N.M. 1960).}
\item \footnotesize{See N.M. Const. art. XVI, § 2.}
\item \footnotesize{State ex rel. State Game Comm'n v. Red River Valley Co., 51 N.M. 207, 182 P.2d 421 (1945).}
\item \footnotesize{First State Bank v. McNew, 33 N.M. 414, 269 P. 56 (1928). See also Albuquerque Land & Irrigation Co. v. Gutierrez, 10 N.M. 177, 61 P. 357 (1900) (holding that a corporation could appropriate water for a third party).}
\item \footnotesize{1998 Op. Atty Gen. No. 98-01.}
\item \footnotesize{See §§ 72-5-28, 72-12-8 NMSA 1978 (2000 Cum.Supp.). These statutes do not allow forfeiture when a reasonable cause has brought about the nonuse. Prior to 1965, there was no requirement of notice from the State Engineer and the additional one-year waiting period.}
\item \footnotesize{State ex rel. Reynolds v. South Springs Co., 80 N.M. 144, 452 P.2d 478 (1969).}
\end{itemize}
authority to the State Engineer to issue permits.\textsuperscript{21} The permit process requires the applicant to prove that a new use will not harm other users. This was a significant change from the pre-1907 law. Prior to 1907, the a person challenging a newer use had to prove they would be harmed in order to succeed in the challenge.

\section*{B. Administration of Water Rights}

Adoption of the New Mexico Water Code,\textsuperscript{22} created the Office of the Territorial (now State) Engineer.\textsuperscript{23} The State Engineer is charged with “the supervision of waters of the State and of the measurement, appropriation, distribution thereof\textsuperscript{24} .[a]ccording to the licenses issued by him and the adjudications of the courts.”\textsuperscript{25} 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….”\textsuperscript{26} 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.”\textsuperscript{27} The State Engineer can impose conditions on licenses and permits issued.\textsuperscript{28} The State Engineer has the power to appoint water masters, to apportion water consistent with priorities, and to install headgates and meters for measuring the quantity of water being used.\textsuperscript{29}

This year, the state legislature passed House Bill 445 which expands the State Engineer’s enforcement powers. House Bill 445 allows the State Engineer to issue compliance orders for violations of the Water Code, State Engineer rules and regulations, permit or license conditions, and court orders entered in water adjudications. The compliance order must state the nature of the violation and require compliance within a specified time period. According to the legislation, the State Engineer may impose penalties for overdistribution or illegal diversion of water in an amount up

\begin{itemize}
\item \textsuperscript{22} Codified at Chapter 72 NMSA 1978 (2000 Cum. Supp.).
\item \textsuperscript{23} § 72-2-1 NMSA 1978 (1997 Repl.).
\item \textsuperscript{24} § 72-2-2 NMSA 1978 (1997 Repl.).
\item \textsuperscript{25} § 72-2-9 NMSA 1978 (1997 Repl.).
\item \textsuperscript{26} § 72-2-8(A) NMSA 1978 (1997 Repl.); State Engineer regulations may be for the purpose of “prescribing procedures and interpreting and exemplifying the statutes to which they relate.” §§ 72-2-8(B)(1) NMSA 1978 (1997 Repl.).
\item \textsuperscript{28} \textit{Roswell v. Berry}, 80 N.M. 110, 112, 452 P.2d 179 (1969).
\item \textsuperscript{29} §§ 72-3-2, 72-5-20 NMSA 1978 (1997 Repl.); § 72-12-3, 72-12-7 NMSA 1978 (1997 Repl.).
\end{itemize}
to double the amount of the unauthorized diversion. While the penalty is discretionary, the State Engineer must consider the seriousness of the violation, any good faith efforts to comply with applicable requirements and other relevant factors. Persons named in the compliance order have the opportunity to informally contest the alleged violation with the State Engineer, in addition to a public hearing pursuant to Sections 72-2-16 and 72-2-17 NMSA 1978. If a final compliance order is issued and a person fails to comply, the State Engineer may file a civil action to enforce the order.

The State Engineer manages water resources to maintain an equilibrium between ground and surface water in stream-related aquifers. New Mexico recognizes the hydrologic relationship between water in the ground and water flowing on the surface in stream beds. Because virtually all surface waters of the State are appropriated, stream-connected groundwater appropriations or transfers are only approved with condition requiring retirement of surface water rights to offset any depletions of surface flow caused by groundwater pumping.

C. Appropriation and Transfer of Water Rights and State Permitted Uses

Water rights and permits to use water can be acquired in several ways: (1) by appropriating the right or successfully applying for a permit or (2) purchasing a right or permit from another. Once a water right or permit is acquired, the owner can transfer the right or permit, through sale or lease, change or supplement the point of diversion, or type of use.

1. Appropriation

Because almost all surface waters in the State (and all of the major rivers, such as the Rio Grande and Pecos) are fully appropriated, as a general rule surface waters today can only be acquired through transfer, as discussed below. Prior to the declaration of a basin by the State Engineer, no permit is needed to appropriate groundwater. To appropriate groundwater from a declared basin one must apply for a permit from the State Engineer. After filing an application, the applicant publishes a notice of application to appropriate in a newspaper of general circulation where the right is located. Anyone objecting to the appropriation can file a formal protest with the State Engineer. When there is a protest, the State Engineer may hold a formal hearing on the issues set


31 City of Albuquerque v. Reynolds, 71 N.M. 428, 379 P.2d 73 (1963). In 1994 the Attorney General issued an opinion that the State Engineer's practice was unlawful to the extent that the specific rights to be retired need not be identified in the application because it effectively prevented public notice and comment. 1994 Op. Atty. Gen. No. 94-07.


33 § 72-12-3 NMSA 1978 (1997 Repl.).

34 § 72-12-3(D) NMSA 1978 (1997 Repl.).

35 Id.
out in the protest and decide the case. 36 A permit will be granted only if the State Engineer finds there is unappropriated water in the basin, that the proposed appropriation would not impair existing water rights, is not contrary to conservation of water within the State, and is not detrimental to the public welfare of the State. 37 The State Engineer can require retirement of surface water rights or permits. Like surface water, if the basin is fully appropriated, the only way to acquire a groundwater right or permit is through a transfer.

Under §72-12-1, New Mexico allows the State Engineer to issue permits allowing use for “watering livestock, for irrigation not to exceed one acre of noncommercial trees, lawn or garden; [and] in household or other domestic use...”38. An application must be made for such use, but by statute, if water is available, the State Engineer has limited discretion to deny the permit39 (see SB 602 discussion below). A domestic well applicant may receive a domestic well permit from the State Engineer without acquiring commensurate groundwater rights or retiring offsetting surface water rights.

During the 2001 legislative session, the domestic well statute was amended by Senate Bill 602 to include a provision conditioning the statutory mandate. Senate Bill 602 provides specific statutory authority for local municipal regulation of domestic wells. The new law requires that the State Engineer issue permits “if applications for domestic water use within municipalities conform to all applicable municipal ordinances and an application is made for a municipal permit pursuant to Chapter 3, Article 53 NMSA 1978.”

Whether domestic wells may be “transferred” is unclear. Certainly, a perfected pre-basin or Mendenhall domestic well right can be transferred. There also are examples of the State Engineer allowing perfected permits under §72-12-1 to be transferred and consolidated into a mutual domestic water system.

2. Transfer

36 § 72-12-3(F) NMSA 1978 (1997 Repl.).

37 In Young & Norton v. Hinderlider, the Territorial Supreme Court upheld the authority of the Territorial Engineer to deny a permit because the proposed water use was contrary to the public welfare. 15 NM 666 (1910). The court refused to hold that public welfare included only health and safety. The court considered the following factors to be dispositive:

(1) That the State’s waters should be used to secure the greatest possible benefit for the public;
(2) Whether the proposed project was for speculative purposes;
(3) Whether the cost of a project was so excessive that participants could not afford to pay for it;
(4) Whether the project was efficient; and
(5) Whether the project would benefit the residents of the area.


39 Prior to the passage of SB 602, the State Engineer had no discretion to deny a domestic well application if water was available. See §72-12-1 NMSA 1978 (2000 Cum. Supp.); See also n. 188.
The right to transfer a water right or permit (i.e., to change its point of diversion and/or place and/or purpose of use) is generally the same whether the water is ground or surface. To transfer a water right, an applicant must show that the transfer (1) will not impair other water rights; (2) is not contrary to conservation and (3) is not detrimental to public welfare.\textsuperscript{40}

Persons seeking to transfer a water right or permit must file a formal application with the State Engineer. After filing an application, the applicant publishes a notice of intent to transfer the right or permit in a newspaper of general circulation where the right is located.\textsuperscript{41} Anyone objecting to a proposed transfer can file a formal protest with the State Engineer. Where no protest is filed and the State Engineer finds, after a technical and legal review, the transfer compatible with State law, the transfer application will be approved. Where there is a protest, the State Engineer may hold a formal hearing on the issues set out in the protest and decide the case.\textsuperscript{42} A party can appeal the State Engineer’s decision to the district court.

Where a water right has been adjudicated, the protestant bears the burden of disproving the right’s use and amount. This is the case because an existing adjudication decree is accepted as \textit{prima facie} evidence of the size and validity of the right. A water right priority date remains the same even though it is transferred.

Transfers are based on the amount of water consumptively used. Accordingly, water can be transferred from basin to basin, subject to interstate compacts and federal law.\textsuperscript{43} In such an instance, the amount that can be transferred is limited to the prior consumptive use. Simply put, an out-of-basin transfer cannot make the basin hydrologically worse off than it was before.\textsuperscript{44}

New Mexico’s water right leasing statute allows temporary transfers,\textsuperscript{45} but those transfers like permanent transfers require legal notification and a State Engineer permit.\textsuperscript{46} Where a reallocation of water is within irrigation or conservancy districts, and is on lands served by the district and is within the scope of an already existing State Engineer permit, an additional permit is not required.

\section{Supplemental and Replacement Wells}

\textsuperscript{40} §§ 72-5-23, 72-12-7 NMSA 1978 (1997 Repl.).

\textsuperscript{41} §§ 72-5-23, 72-12-7(A) NMSA 1978 (1997 Repl.).

\textsuperscript{42} §§ 72-5-5(A), 72-12-3(F) NMSA 1978 (1997 Repl.).

\textsuperscript{43} § 72-5-23 NMSA 1978 (1997 Repl.).

\textsuperscript{44} § 72-5-23 NMSA 1978 (1997 Repl.).

\textsuperscript{45} § 72-6-3 NMSA 1978 (1997 Repl.).

\textsuperscript{46} § 72-6-3 NMSA 1978 (1997 Repl.)
An owner of a water right may supplement or replace a well, under certain conditions.

a. **Replacement well over one hundred feet from original well.** If an emergency situation exists in which the delay caused by publication and hearing would result in a crop loss or other serious economic loss, a water right owner may drill and use a replacement well over one hundred feet from the original well upon making application, but prior to publication and hearing if: (1) the well is drilled into the same underground basin, (2) the amount of appropriation remains the same, and (3) the State Engineer makes a preliminary assessment that the replacement well will not impair existing water rights.\(^47\)

In cases where no emergency exists, or the State Engineer’s preliminary investigation shows that the drilling and use of a replacement well may impair existing rights, a permit will not be issued until after publication and hearing.\(^48\) In this circumstance, the same factors as in a transfer (impairment, conservation of water, and public welfare) will be examined.\(^49\)

b. **Replacement well within one hundred feet of original well.** An owner of a water right or permit may drill and use a replacement well before applying to the State Engineer and publication and hearing if: (1) the well is drilled in the same underground basin, (2) the amount of appropriation remains the same, (3) an emergency exists in which the delay caused by application, publication, and hearing would result in crop loss or other serious economic loss, and (4) the State Engineer is notified prior to drilling.\(^50\) The water right owner must then apply for a permit within 30 days after drilling begins. If other water right owners claim to be injured by the drilling of such a well, they cannot stop the drilling or the use of the well, and can only challenge it through a lawsuit for damages, or by protesting the granting of a permit.\(^51\)

c. **Supplemental Well.** The statutory provision for drilling a supplemental well is similar to that for drilling a replacement well over one hundred feet of the original well. If an emergency situation exists in which the delay caused by publication and hearing would result in a crop loss or other serious economic loss, a water right owner may drill and use a supplemental well upon making application, but prior to publication and hearing if: (1) the well is drilled into the same underground basin, (2) the amount of appropriation remains the same, and (3) the State Engineer makes a preliminary assessment that the supplemental well will not impair existing water rights.\(^52\)

\(^47\) §§ 72-12-23 NMSA 1978 (1997 Repl.).

\(^48\) Id.

\(^49\) Id.

\(^50\) §§ 72-12-22 NMSA 1978 (1997 Repl.).

\(^51\) Id.

\(^52\) §§ 72-12-24 NMSA 1978 (1997 Repl.).
In cases where no emergency exists, or the State Engineer’s preliminary investigation shows that the drilling and use of a supplemental well may impair existing rights, a permit will not be issued until after publication and hearing.\textsuperscript{53} In this circumstance, the same factors as in a transfer (impairment, conservation of water, and public welfare) will be examined.\textsuperscript{54}

4. Change of Ownership

A declared, or adjudicated water right or permit can be conveyed to a new owner. Although the sale of a water right requires a written document, such as a special warranty deed, the new owner must also file a change of ownership form with the State Engineer, along with a copy of the written document. The change of ownership and the written document must also be recorded with the clerk of the county where the water right is located.\textsuperscript{55} The OSE has specific “change of ownership” forms to be used to notify the OSE. This does not take the place of a written document stating that ownership is being transferred.

D. Other State Agencies Addressing Water Rights

The State Engineer is not alone in administering water. Over the years, the legislature has spawned numerous other entities with overlapping jurisdictions. For example, the Interstate Stream Commission is given the authority to investigate, develop and conserve the waters of New Mexico both intrastate and interstate.\textsuperscript{56} At the local level numerous entities such as conservancy and irrigation districts and acequias are granted authority over management and administration of waters within their respective jurisdictions. Some have been in existence for centuries, others are more modern creations.

1. Traditional Entities

a. Acéquias and Community Ditch Associations. Acéquias, or community ditches, are ditch systems that are managed by a community and used for irrigation purposes. The first acéquias were used in the Southwest by Pueblo Indians, and early Spanish settlers adopted this water distribution method.\textsuperscript{57} In New Mexico, settlements were formed along the banks of perennial rivers, or in the mountain valleys where water from springs and creeks was

\textsuperscript{53} Id.

\textsuperscript{54} Id.

\textsuperscript{55} § 72-1-2.1 NMSA 1978 (1997 Repl.).

\textsuperscript{56} § 72-14-3 NMSA 1978 (1997 Repl.).

\textsuperscript{57} DAVID H. GETCHES, WATER LAW 419 (3rd ed. 1997).
reasonably certain to be available for irrigation at the needed times.\textsuperscript{58} Acéquias were established by individuals or community members to convey water. A main canal was constructed with lateral ditches to distribute the water,\textsuperscript{59} with laterals to serve their individual lands.\textsuperscript{60} The water rights were owned by the individuals, but the ditch was collectively owned as tenants-in-common.\textsuperscript{61} When a landholder under a community acéquia conveyed his land, his right to the use of water as a member of the community passed with his land.\textsuperscript{62}

In New Mexico, acéquias continue to operate; but acéquia management is now governed by statute.\textsuperscript{63} All New Mexico inhabitants have the right to construct and use either private or common acéquias.\textsuperscript{64} With a community ditch or acéquia, the acéquia members are not entitled to compensation for the ditch or ditches crossing their respective properties.\textsuperscript{65} After construction, the ditches belong to the acéquia members, and no other person can use the ditch without a majority consent from the owners and payment of a share of ditch construction costs proportionate to the amount of water to be used.\textsuperscript{66} Ownership of the ditch is separate the right to use water that the ditch conveys.\textsuperscript{67}

Officials elected by the community manage the ditch or ditches with respect to construction, operation, maintenance, and water allocation, and the ditch members provide the necessary labor to construct and maintain the ditch.\textsuperscript{68} Acéquias have three elected commissioners and one mayordomo,

\textsuperscript{52} Abalos, 18 N.M. at 692.

\textsuperscript{59} Supra note 2.

\textsuperscript{60} Id.

\textsuperscript{61} Abalos, 18 N.M. at 694-695.

\textsuperscript{62} Id. at 692.


\textsuperscript{64} §73-2-1 NMSA 1978 (1999 Cum. Supp.).

\textsuperscript{65} §73-2-3 NMSA 1978.

\textsuperscript{66} §73-2-7 NMSA 1978 (1999 Cum. Supp.).

\textsuperscript{67} Holmberg v. Bradford, 56 N.M. 401, 244 P.2d 785 (1952).

\textsuperscript{68} See Snow v. Abalos, 18 N.M. 681, 140 P. 1044 (1914).
or superintendent. Each must own an interest in the ditch or a water right. The officers have authority to manage the affairs of the acequia, including contracting and making assessments to provide payment of expenses related to the acequia, distributing water, supervising ditch maintenance and operation, and collecting fines.

Acéquias are corporations with the power to sue and be sued. Moreover, acéquias are considered political subdivisions of the state. This status is significant because it allows acéquias to condemn land. It also enables acéquias to receive loans from the Interstate Stream Commission for ditch improvements, and exempts them from payment of taxes on irrigation works.

b. Cooperative and Mutual Domestic Water Associations. Water for domestic uses was first described as “dipping” rights. People in the community had the right to take water from ditches or ponds for domestic uses. Today, these uses are often met through cooperative associations. Cooperatives may be formed to acquire and distribute any type of goods or services, including water.

Any five or more individuals or two or more associations may incorporate to form a cooperative. The “dipping” rights provided the first water rights of many of these associations. Cooperatives may be financed in a variety of ways. Usually a cooperative sells shares to its members. Cooperatives may also borrow money, mortgage cooperative assets or enter into agreements of mutual federation and aid with other cooperatives.

Water cooperatives are private, not public, utilities because they do not hold themselves out to serve the public. Cooperatives are not required to obtain a certificate of necessity and convenience

70 Id.
73 §73-2-28 NMSA 1978.
76 Id.
77 §53-4-3 NMSA 1978 (1983 Repl.).
78 §53-4-2 NMSA 1978 (1983 Repl.).
79 §53-4-4 NMSA 1978 (1983 Repl.).
prior to acquiring or developing a water supply system.\textsuperscript{80} However, cooperatives must file an annual report with the public regulation commission that discusses the cooperative's financial condition.\textsuperscript{81} Failure to do so may result in revocation of an association's corporate status.\textsuperscript{82}

In many parts of New Mexico, the growth of residential communities and land development are placing greater and greater demands on the natural and institutional resources of rural regions. As development expands beyond traditional community environs into new areas populated by diverse consumers, new institutions may be necessary to cope with the added demands, particularly with regard to the supply and delivery of water in adequate amounts and of drinking quality. Under New Mexico law, apart from cooperative associations, eight types of water entities may be formed to provide water for domestic and industrial consumers. These are investor owned utilities,\textsuperscript{83} municipal utilities,\textsuperscript{84} municipal improvement districts; county-owned utilities; county improvement districts;\textsuperscript{87} intercommunity water district\textsuperscript{88}; water and sanitation districts; and sanitary projects.\textsuperscript{90}

The Sanitary Projects Act, NMSA 1978, §§ 3-29-1 to 3-29-20, provides for the formation of "associations" for the purpose of providing sanitary domestic water facilities, sewage works, or both. The predecessor organizations to sanitary project associations were called mutual domestic water consumers' associations, which were provided funding under a 1947 act. The 1947 act was replaced in 1957 with the Sanitary Projects Act. As a prerequisite to forming a sanitary project,

\begin{itemize}
\item \textsuperscript{80} See generally N.M. STAT. ANN. Chapter 53, Article 4 (1983 Repl.).
\item \textsuperscript{81} § 53-4-34 NMSA 1978 (1999 Cum. Supp.).
\item \textsuperscript{82} § 53-4-35 NMSA 1978 (1983 Repl.).
\item \textsuperscript{84} § 3-18-25 NMSA 1978 (1999 Repl.); see also § 3-27-2 NMSA 1978 (1995 Repl.).
\item \textsuperscript{85} § 3-33-3 NMSA 1978 (1995 Repl.).
\item \textsuperscript{86} § 4-36-8 NMSA 1978 (1999 Cum. Supp.).
\item \textsuperscript{87} §§ 4-55A-1 – 4-55A- 3(A) NMSA 1978 (2000 Cum. Supp.).
\item \textsuperscript{88} § 3-28-1 NMSA 1978 (1995 Repl.).
\item \textsuperscript{90} §§ 3-29-2 to 3-29-5 NMSA 1978 (1995 Repl.).
\end{itemize}
project “sponsors” (unincorporated communities) must form an association\textsuperscript{91} and submit a written proposal to the New Mexico Environment Department (Department).\textsuperscript{92}

New Mexico's Utility Operators Certification Act requires the Public Regulation Commission to certify operators of any public water supply system, which are those systems having at least 15 service connections or regularly serving an average of at least 25 individuals at least 60 days a year.\textsuperscript{93}

2. Organizations of the Twentieth Century

Irrigation districts and conservancy districts are the product of federal reclamation law. Forces converged at the end of the nineteenth century to support the creation of a federal role in the development of western water. First, the public land laws of the nineteenth century did not work; land and water monopoly scandals abounded.\textsuperscript{94} Second, there was a decade of drought that began in 1886.\textsuperscript{95} The third factor was the political philosophies and common sense of John Wesley Powell.

Powell was...a political philosopher who proposed a whole new system of government for the arid region based upon the needs generated by the nature of the area rather than upon the standard preconceptions of distant legislators.\textsuperscript{96}

To Powell, western water control was a “national” issue, that required a federal presence. Although it is the primary role of the federal government today, the role of financier and builder of water delivery systems was not popular until the 1890s. With Theodore Roosevelt’s election, there was

\textsuperscript{91} § 3-29-4.

\textsuperscript{92} Id.

\textsuperscript{93} § 61-33-2 1 (1) NMSA 1978 (1999 Repl.).


\textsuperscript{95} Ibid.

\textsuperscript{96} Ibid., citing to J. Powell, REPORT ON THE LANDS OF THE ARID REGION (Govt. Print. Office 1879) and 11 U.S. GEOLOGICAL SURVEY ANN. REP. PL. 2, 203-89 (1889-90). Kelley, the author of this section of Clark’s treatise, states: The antimonopoly provisions that have figured so centrally in reclamation law were a direct outgrowth of Powell’s proposals. He saw that:

when the area to which it is possible to take the water of any given stream is much greater than the stream is competent to serve, if the land titles and water rights are severed, the owner of any tract of land is at the mercy if the owner of the water right...If the water rights fall into the hands of irrigating companies and the lands into the hands of individual farmers, the farmers then will be dependent upon the stock companies, and eventually the monopoly of water rights will be an intolerable burden to the people.
presidential support for a program of federal dam and reservoir building. The June 17, 1902, Reclamation Act was the result.

The Reclamation Act promised water storage and distribution systems of a massive size to be delivered to farmers at federally subsidized, interest free rates. In order to take advantage of this federal program, local organizations had to be established. Irrigation districts were created with the sole purpose of delivery of irrigation water to their members. Over time, some irrigation districts have evolved to also provide hydroelectric power generation, operation of recreational facilities, drainage, flood control, sanitation and municipal and industrial water supply. All of the seventeen contiguous western states have irrigation district laws, although some are called water conservation, water improvement, or reclamation districts.

a. Irrigation Districts. The New Mexico territorial government provided a new statutory system for creating the local organizations. In New Mexico, a majority of resident freeholders owning, or having title to, more than one-half of the lands in any district in the state may propose the organization of an irrigation district to irrigate said lands pursuant to the Irrigation Act. A petition for the formation of a district is presented to the board of county commissioners, rather than to a court, and residents of the proposed district vote on the proposal.

An irrigation district is governed by an elected board of directors. In addition to the allocation of water among users within a district’s service areas, the duties of the board consist of managing and conducting the affairs and business of the district, the imposition of assessments on owners within the district, the formation of contracts, hiring of employees, reporting to the State Engineer on available annual water supply per acre of land, the construction or acquisition of

99 DAVID H. GETCHES, WATER LAW 434 (3rd ed. 1997); see “Conservancy Districts” infra.
100 GEORGE A. GOUDEL AND DOUGLAS L. GRANT, CASES AND MATERIALS ON WATER LAW 406 (5th ed. 1995).

Texas was added as the seventeenth state in 1906 so it could benefit from the Elephant Butte Dam project.

101 “Resident freeholder” is any citizen of the United States owning land within the district or the evidence of title to said land, or who is an entrant under the public land laws of the United States or a purchaser under contract for purchase of state lands, and shall also include corporations, associations and copartnerships owning land within the district. § 73-9-3 NMSA 1978.

102 § 73-9-1 NMSA 1978. With some exceptions, ditches, canals and reservoirs and lands irrigated therefrom constructed before March 18, 1909, are exempted from the requirements of this Act. Id.

103 §§ 73-9-3 to 73-9-6 NMSA 1978.

104 § 73-9-5 NMSA 1978.
irrigation works and the creation of necessary rules and regulations.\textsuperscript{105} The board also may lease or rent district water to persons outside the district,\textsuperscript{106} and acquire water rights by any legal means.\textsuperscript{107} Moreover, a board may sell bonds to finance the operation of the district,\textsuperscript{108} however, a district is not a state agency.\textsuperscript{109} Irrigation district landowners, rather than the districts, own the water rights they exercise.\textsuperscript{110} The users’ rights are essentially contractual.\textsuperscript{111} Users must pay taxes on all tracts of land within the district.\textsuperscript{112}

b. Conservancy Districts. Conservancy districts were established in order to furnish water management services that irrigation districts and other entities historically were unauthorized to provide, such as drainage, flood control and sediment control.\textsuperscript{113} The authority to create and operate conservancy districts in New Mexico derives from the Conservancy Act.\textsuperscript{114}

Under the Conservancy Act, conservancy courts have jurisdiction to establish conservancy districts.\textsuperscript{115} A petition for the formation of a conservancy district must be signed and filed by the owners of more than one-third of all of the real property in the proposed district.\textsuperscript{116} A public hearing is held and, if the district formation is neither publicly protested nor judicially rejected, the court will order the county commissioners in the county of the proposed district to conduct a citizen election.\textsuperscript{117}

\textsuperscript{106} Id.
\textsuperscript{108} § 73-9-18 NMSA 1978.
\textsuperscript{110} New Mexico ex rel. State Engineer and Pecos Valley Artesian Conservancy Dist. v. Lewis, Chaves County Cause Nos. 20294 & 226000, Decision and Orders Re: United States’ Motion for Reconsideration and Clarification of Court’s Decisions and Orders Re: Threshold Legal Issue No. 3 or for Entry of Judgment Pursuant to Rule 54 (c), at 7 (March 19, 1998).
\textsuperscript{111} Id.
\textsuperscript{112} § 73-9-24 NMSA 1978.
\textsuperscript{113} IRA G. CLARK, WATER IN NEW MEXICO, 205-206 (1987).
\textsuperscript{114} NMSA 1978, ch. 73, arts. 14-17.
\textsuperscript{115} § 73-14-4 NMSA 1978.
\textsuperscript{116} § 73-14-5 (A) NMSA 1978 (1999 Cum. Supp.).
\textsuperscript{117} §§ 73-14-7, 73-14-8, 73-14-9 NMSA 1978.
Electors consist of all qualified voters and landowners of the proposed district.\textsuperscript{118} Should the proposal pass, the conservancy court declares the district organized and appoints a board of directors comprised of five persons who are district residents and property owners.\textsuperscript{119}

The board of directors for each conservancy district prepares a conservancy plan for the improvements for which the district was created.\textsuperscript{120} The plan is subject to approval by the conservancy court.\textsuperscript{121} After approval, the board has the authority to operate works and improvements necessary to implement the plan.\textsuperscript{122}

Conservancy districts are political subdivisions of the state with all of the powers of public or municipal corporations.\textsuperscript{123} Districts have the power to sue and be sued, to incur debts, liabilities, obligations, to exercise the right of eminent domain, to tax, and to issue negotiable bonds.\textsuperscript{124}

Conservancy districts have broad powers over water ownership and management within their boundaries. Conservancy districts may own, lease, use and sell water rights.\textsuperscript{125} Persons or other entities within a district continue to own water rights acquired by them or their predecessors in interest prior to the formation of the district,\textsuperscript{126} however, rights acquired or developed by a district after its formation belong to the district.\textsuperscript{127} Additionally, a district’s rights are not subject to loss by prescription, adverse possession, non-use or forfeiture.\textsuperscript{128} Finally, a district has the duty to recognize “vested irrigation water rights” and the “specific and unquestioned power” to properly allocate “the water remaining for irrigation” for the purposes most essential for the welfare and economy of the

\textsuperscript{118} § 73-14-12 NMSA 1978.

\textsuperscript{119} § 73-14-17 NMSA 1978. However, the board of directors for districts located in four or more counties is determined by popular vote. \textsuperscript{See} §§ 73-14-18 to 73-14-32 NMSA 1978 (1999 Cum. Supp.).

\textsuperscript{120} § 73-14-36 NMSA 1978.

\textsuperscript{121} Id.

\textsuperscript{122} § 73-14-37 NMSA 1978.

\textsuperscript{123} § 73-14-13 NMSA 1978.

\textsuperscript{124} Id.

\textsuperscript{125} § 73-14-47(F) NMSA 1978.

\textsuperscript{126} § 73-14-43© NMSA 1978.


\textsuperscript{128} § 73-17-21 NMSA 1978 (1999 Cum. Supp.).

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landowners within the district.\textsuperscript{129} Conservancy districts can distribute and allocate water available for irrigation in the manner they deem reasonable and proper,\textsuperscript{130} and may alter the distribution and allocation as often as necessary.\textsuperscript{131}

\section*{E. Water Rights Adjudication}

New Mexico law requires the adjudication of all water use in order to define what each person's water right is and to gain information needed to maintain a balance between water supply and demand.\textsuperscript{132} A water rights adjudication determines the extent and ownership of each water right in a specific geographical area, usually a river drainage basin or groundwater basin. It is similar to a quiet title suit to establish the ownership of land. The specific adjudications occurring in the planning areas include the Rio Pojoaque system,\textsuperscript{133} the Rio Santa Cruz and Rio de Truchas system,\textsuperscript{134} the Rio Chama system,\textsuperscript{135} and the Santa Fe River system.\textsuperscript{136}

Water rights have been adjudicated since before the enactment of the Water Code in 1907,\textsuperscript{137} and the process is ongoing. Because of the complexity and difficulty of sorting out the tens of thousands of water right claims across the State, the majority of claims have not been adjudicated.

\begin{itemize}
\item \textsuperscript{129} § 73-14-49 NMSA 1978; Declaration of policy. It is recognized that in conservancy districts heretofore or hereafter organized under New Mexico law that certain land therein has or may have vested irrigation water rights. While fully recognizing such rights, nevertheless, in the proper operation of such districts, and especially in time of droughts, it is essential that the districts have the specific and unquestioned power to distribute the water remaining available for irrigation and to allocate the same for the purposes most essential for the welfare and economy of the landowners within the district. To this end, the legislature deems it of manifest importance that conservancy districts have the unquestioned power to make such distribution and allocation of irrigation waters.
\item \textsuperscript{130} § 73-14-50 NMSA 1978.
\item \textsuperscript{131} Id.
\item \textsuperscript{132} § 72-4-15 NMSA 1978 (1997 Repl.); see also Snow v. Abalos, 18 N.M. 681, 140, P.1044 (1914) (purpose of statute is to determine water right and facilitate distribution of water).
\item \textsuperscript{133} State of New Mexico ex rel. State Engineer v. Aamodt, U.S. Dist. Ct. Cause No. 6639N).
\item \textsuperscript{134} State of New Mexico ex rel. State Engineer v. Abbott, U.S. Dist. Ct. Cause No. CIV 7488 and 8650 SC.
\item \textsuperscript{135} State of New Mexico ex rel. State Engineer v. Aragon, U.S. Dist. Ct. Cause No. CIV 69-07941.
\item \textsuperscript{136} Anaya v. Public Service Company of New Mexico, Santa Fe County Cause No. 43,347.
\item \textsuperscript{137} 1907 N.M. Laws, Ch. 49; Taos Repartimiento of 1823.
\end{itemize}
An adjudication is a lawsuit. Due to the complexity of a case involving many parties, the courts usually appoint a special master, an expert in property or water law, to supervise the case and decide most procedural issues. Although all adjudications have the same ultimate goal, the procedures, even in the on-going adjudications in this region, are not identical.  

Although a water right adjudication is a complex process which usually takes many years to complete, there are definite advantages to having an adjudicated water right, rather than a permit to use. The final court decree removes controversies concerning title to water rights and the validity of water rights.

F. Local and Regional Water Planning

As discussed above, water rights that are not exercised for a period of four years are subject, after notice, to forfeiture by New Mexico statute, and water rights that go unused for an unreasonably long period (perhaps 10 to 15 years) are subject to common law abandonment. Since municipalities, counties and other specified public entities require a longer planning horizon to manage water prudently, in 1985 the State adopted the 40-Year Planning Statute. The statute merely codified a prior practice of the State Engineer concerning the amount of time a municipality had to show application to beneficial use. The Planning Statute allows the public entities to acquire and hold unused water rights in an amount to meet reasonable needs within 40 years, based on predicted needs set out in regional water plans.

The State has recognized the importance of regional water planning, such as that being undertaken by the Jemez y Sangre Water Planning Council. Because water users within the boundaries of a common underground basin or along a water course compete for a finite and shared resource, integrated and comprehensive water planning reduces conflict and allows for reasonable and efficient management and use of water resources. Statutory requirements for regional planning by the Interstate Stream Commission state that such a planning region should contain “sufficient hydrological and political interest in common to make water planning feasible.”

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138 § 72-4-13 provides in part: “[T]he state engineer shall make hydrographic surveys and investigations of each stream system and source of water supply in the state, beginning with those most used for irrigation, and obtaining and recording all available data for the determination, development and adjudication of water supply of the state....” § 72-4-15 NMSA 1978 (1997 Repl.).


142 § 72-14-44 NMSA 1978 (1997 Repl.).

143 § 72-14-44(D) NMSA 1978 (1997 Repl.).
G. Water Project Finance Act

In 2001, the New Mexico State Legislature passed Senate Bill 169, or the "Water Project Finance Act" (Act). The Act provides funding for "qualifying" water projects for the purpose of promoting water use efficiency, resource conservation and protection, and fair distribution and allocation of scarce resources to all users. Qualifying water projects include those storing, conveying or delivering water to users; those involved in the restoration of endangered species habitat; those involved in the restoration and management of watersheds; and flood prevention projects.

Senate Bill 169 creates a Water Trust Fund within the state treasury that annually distributes money to the Water Project Fund. The Water Project Fund is created in the New Mexico Finance Authority (NMFA) and consists of both Water Trust Fund distributions and all other money allocated to the Fund to achieve the purposes of the Act. The legislation authorizes the NMFA to make loans or grants to political subdivisions for qualifying water projects.

NMFA financing is based on the recommendation of the Water Trust Board (Board). The Board is created under the Act and includes, in part, the governor, the State Engineer, the Chairman of the Interstate Stream Commission, presidents of the boards of directors of several irrigation and conservancy districts and numerous state and public officials. The Board also is responsible for adopting rules governing terms and conditions of grants or loans made from the Water Project Fund, giving priority to projects that have urgent needs, and matching contributions from federal or local funding sources. Beginning July 2003, the Water Trust Fund will make an annual distribution of $4,000,000 to the Water Project Fund. This is in addition to $20,000,000 appropriated in 2001 from the general fund to the Water Project Fund for expenditures in subsequent fiscal years.

III. Pueblo Water Rights

A. Pueblo Rights Arise Independent from State Allocation Law, State Regulation and State Administration

The Pueblo people have made use of the region’s water for several centuries. Before the Spanish arrived and before the State of New Mexico even existed, the Pueblo people were regulating water use through a formalized system based upon cultural concepts of what was a valid use of a very scarce, but essential, element. The United States recognizes and protects the right of the Pueblos to make their own laws and be governed by them. Part of the right of self-governance is that others cannot impose their definitions of what is and is not a valid use of water on the Pueblos. The reason is very fundamental. Beneficial use of water is tied to what is considered to be the public welfare of the State - the values that are important to the people of the State. One of the reasons why governments exist at all is to act collectively for the benefit of all - the public. In Berman v. Parker, the United States Supreme Court explained the relationship between self-governance and the public welfare concept:

The concept of public welfare is broad and inclusive. The values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well-balanced as well as carefully patrolled.\textsuperscript{145}

In order for Pueblos to maintain their essential right of self-governance, courts recognize that the Pueblos’ water rights arise independent of the State allocation rules and State administration of those rules. Pueblos have a compelling interest in regulating water use to ensure an available supply over time. For Pueblos, this interest is much greater than it is for the State because, unlike the State, the Pueblos have been here for centuries and fully intend to remain on their lands for several more centuries.

Other differences have to do with different public policy. Pueblo populations have been steadily increasing in the last half of the twentieth century and are likely to continue to increase at a greater rate than other segments of society. There are at least two possible explanations for this. First, the Pueblos are recovering from the significant effects of epidemics at the beginning of the twentieth century when their populations reached the lowest point in history. Also, Pueblos, as with other tribes, have been working to increase economic opportunities on tribal lands. As these opportunities become available, members are returning to the Pueblos to live. At the same time, the Pueblos are only now making the kind of infrastructure investments that other communities made long ago. These investments will necessarily increase the per capita water use.

Ultimately, it is this regulatory power of the Pueblos that must be taken into consideration in regional water planning efforts. A Pueblo’s authority to allocate and regulate water is not affected by State law, including the planning process. However, without at least some cooperative efforts among different tribes and non-Indian communities, it is impossible for regional planning to be anything more than a wish list.\textsuperscript{146} One of the primary reasons is that the Pueblos are the senior-most users on a river. Since the Pueblos have been in existence and irrigating lands for centuries, these senior priority water rights are quite large and quite likely exceed present surface flows across their lands and groundwater inflows due to intervening upstream development. Eventually all of these senior rights will have to be satisfied. At least one court has ruled that the water supplies that can be tapped to meet federally recognized rights include all water, surface or ground, on tribal lands or

\textsuperscript{145} 348 U.S. 26, 33 (1054).

\textsuperscript{146} The Official Report of the Study Committee which led to the adoption of the regional water planning system envisioned that tribes and surrounding communities could enter into joint powers agreements to plan for specific types of future uses, such as municipal uses and thereby avoid sensitive issues concerning the full scope of the Pueblo’s or Tribe’s federally recognized and protected water right. The Report acknowledged that the State agencies involved in water regulation, the Interstate Streams Commission and the State Engineer’s Office, had no authority over the Tribes and Pueblos. “State Appropriation of Unappropriated Groundwater: A Strategy for Insuring New Mexico a Water Future, Second Report”, NMWRRI REPORT, January 1987 at 95-97. This is consistent with the research presented in the First Study. See “State Appropriation of Unappropriated Groundwater: A Strategy for Insuring New Mexico a Water Future, First Report”, NMWRRI REPORT, January 1986 at 132, 141-45.
outside tribal lands, where the diversion affects resources on tribal lands. That same court concluded that, if groundwater was available in the past to satisfy a tribe's federally protected right and is not reasonably available now because of pumping outside the tribe's lands, those pumpers can be enjoined. In re the General Adjudication of All Rights in the Gila River System and Source, 198 Ariz. 330, 9 P.3d 1069 (2000). Any regional water plan must take this compelling fact into consideration if it is to truly reflect the availability of water for the future of the region.

B. Pueblo Aboriginal Rights

The Pueblos' water rights result from the application of very old principles of international law dating back to at least the fifteenth and sixteenth centuries. Once Columbus reached the Americas and reported back, scholars began a debate on whether indigenous people had any rights based solely on their existence. The resolution was the indigenous people did have certain rights, today referred to as "aboriginal" rights. The European sovereigns were obligated to recognize those rights.

Discovery gave title to the government by whose subjects, or by whose authority, it was made, against all other European governments, which title might be consummated by possession...[.]

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The rights thus acquired being exclusive, no other power could interpose between [the discovering nation and the indigenous peoples]. "In the establishment of these relations, the rights of the original inhabitants were in no instance entirely disregarded, but were necessarily to a considerable extent, impaired. They were admitted to be the rightful occupants of the soil, with a legal as well as just claim to retain possession of it, and to use it according to their own discretion."

Pueblos have aboriginal rights to water that arise from the Pueblos' aboriginal existence as autonomous societies and the use of their lands and waters. The Pueblos of New Mexico, unlike many other tribes, reside on lands they have never left. When the United States entered into the Treaty of Guadalupe-Hidalgo (ratified May 30, 1848, proclaimed July 4, 1848, 9 Stat. 922-943), the nation accepted the obligation to recognize and respect the property rights of Mexican citizens in areas acquired from Mexico. For tribal settlements, specifically the Pueblos, the Spanish and Mexican governments recognized and protected a prior right to sufficient water to meet their needs, as needs changed over the years and recognized those prior holdings, thereby extending federal protection to existing Pueblo rights to land and water. These rights exist based upon the original sovereignty of the Pueblos.

In *State ex rel. Reynolds v. Aamodt (Aamodt I)*, Judge Mechem held that these rights were not extinguished by any of the acts of Spain or its successor, Mexico. Therefore, when the United States became the sovereign entity after the treaty, it was obligated to recognize and protect these original rights. Judge Mechem looked at many potentially applicable federal laws to determine whether these federal laws modified the rights of the Pueblos held under Spanish and Mexican law. He concluded that the only federal statute to alter the definition of the Pueblos’ water rights was the 1924 Pueblo Lands Act and the 1933 Act, sometimes referred to as the Pueblo Compensation Act. The Pueblos’ rights include at least irrigation uses, in-stream or non-diversionary uses, stock watering, and municipal and domestic uses. Federal law explicitly preserved these rights. Each of these component rights are briefly discussed below. The *Aamodt* case is the leading case to determine the nature and extent of Pueblo Indian water rights. The discussions below are drawn from rulings in that case, which is still ongoing.

1. **Historically Irrigated Acreage - Ditch Rights**

   a. **Quantity.** The federal district court in *Aamodt* concluded that as to aboriginal irrigation uses, the Pueblos had a prior right to all water necessary to irrigate their farmlands, but that the expanding nature of this right was cut off by the Pueblo Lands Act of 1924. These aboriginal water rights are measured by the amount of water necessary to irrigate all lands irrigated when the United States took sovereignty, 1846, plus any additional lands put into irrigation up to 1924. *Aamodt I*.

   In addition to these rights, Pueblos also have senior water rights for any irrigated lands or water rights associated with the loss of lands pursuant to the Pueblo Lands Act of 1924 and the 1933 Pueblo Compensation Act, where lands or water rights have been reacquired. In these statutes the United States, through the Secretary of the Interior, as trustee for the Pueblos, undertook the duty to acquire rights in land and water to “replace” what was lost through the Pueblo Lands Act (and, therefore, are referred to as “replacement” water rights).

   b. **Priority.** As against all non-Pueblo users, these are senior priority rights. Generally, all rights prior to the 1924 cut off are “aboriginal” or “time immemorial” rights. Also the *Aamodt* Court has found that Spanish law modified the aboriginally based right, because it expressly recognized all Pueblo uses as having a first right, or “right of primacia.” The court determined the United States was obligated to recognize and protect the senior priority.

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149 § 9 of the 1933 Pueblo Compensation Act.


151 618 F.Supp. 993 (D.N.M. 1985)
2. **Stock-watering.** At this time, the *Aamodt* court has not addressed the exact quantity of water available to the Pueblos for this purpose. These uses are being quantified in the same segment as Domestic Use. The court has ruled that priority for these rights is the date of first use for this purpose.

3. **Domestic (Municipal) Use.** The Pueblos are governments with all of the responsibilities of providing for municipal uses for Pueblo residents, for making water available for the construction of homes and the operation of businesses. In *Aamodt* the federal court originally determined that the right, as recognized under Spanish and Mexican law was as follows:

   The water rights of the Pueblos, which were recognized and protected by Spain and by Mexico were defined as a prior and paramount right to a sufficient quantity to meet their present and future needs...[17]

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   Common uses of water were subject to two overriding servitudes in favor of all individuals to meet domestic and sanitary needs...[.]

   ***

   The Pueblos...are entitled to a first right or right of primacia to enough water for their needs. All communities and settlements, including Indian Pueblos are to be favored in the distribution of water “to maintain the community”. Any expansion of water apportionment for any use should be done with as little injury as possible to any party. Availability of excess water should be granted to the Pueblos for their future expansion, based on need.152

The court recently issued an opinion that modifies the measure of the Pueblos’ domestic or municipal water rights. The court determined, as a threshold legal issue that the expansive right under Spanish and Mexican law was cut off by the Pueblo Lands Act of 1924.153 The court stated that the right included the Pueblos’ cumulative use, not just the maximum used in any one year, and that all planned uses as the date of the Act survived.154 The court has not yet ruled on the exact method to be used to quantify these rights. The right, in all probability will be defined as a certain number.

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152 *Aamodt* I at 999.

153 *State ex rel. State Engineer v. Reynolds*, U.S.D.C.N. M. No. 6639, Memorandum Opinion and Order entered January 31, 2001 at pp. 4-5. At least one of the Pueblo parties to this litigation has stated publicly that it intends to seek interlocutory appeal of this decision.

4. **Other Aboriginal Uses.** Judge Mechem ruled that an aboriginal rights claim must meet a two part test: Original occupancy; and aboriginal water use. "Rights which pre-exist a reservation and which are based upon water use initiated before 1924 have aboriginal priority and are measure by actual use."\(^{155}\)

The *Aamodt* court ruled that the method used to quantify the right by reference to some particular type of use does not limit how the Pueblo may actually use the water.\(^{156}\) The court has also ruled that "the Pueblo water rights appurtenant to their lands are the surface waters of the stream systems and the groundwater physically interrelated to the surface water as an integral part of the hydrologic cycle. The Pueblos have the prior right to the use of this water."\(^{157}\) Also, as to the leasing of the Pueblos’ water rights for off-reservation uses, there is legal precedent for that proposition. For several years, the Los Alamos water supply was leased from the Pueblo of San Ildefonso by the United States Government. Also, the Pueblo is a party to an agreement to forbear from putting certain senior water rights to use so that a large community can be developed southeast of Santa Fe.

C. **The Pueblos’ Federally Reserved Water Rights**

The Pueblos can also have federal reserved water rights where lands outside Pueblo grants have been reserved for them by the United States. These rights are known as “*Winters* reserved rights” and reserve sufficient water for the present and future needs of the Pueblo, based on the “practically irrigable acreage” (PIA) of the lands reserved for the Pueblo, or some other appropriate measure depending on the purposes of the creation of the reservation.\(^{158}\) Several courts have held that *Winters* rights are not the same as other federally reserved rights, because of the many purposes served by federally created Indian reservations. Where no specific purpose is identified, there is always the implicit purpose of setting aside a tribal homeland. In these instances the “PIA” standard is used.

The priority date for a “*Winters*” water right is the date the reservation was created or, where the land is set aside primarily for a tribe’s use, that date is used. The *Aamodt* court recognized the possible existence of a right based upon diversions made from an ephemeral source without a man-made structure, but did not decide the transferability of such a right.\(^{159}\) At least one federal court has


\(^{157}\) *Aamodt* I at 1010.

\(^{158}\) *Winters v. United States*, 207 U.S. 564 (1908); *Arizona v. California*, 376 U.S. 340 (1963). In the instance of the San Ildefonso Eastern Reservation, the *Aamodt* Court concluded that the purpose for the Congressional reservation was to provide grazing lands for the Pueblo. The Pueblo’s water rights for the Eastern Reservation were quantified based upon grazing, not irrigable acreage. *Aamodt*, Mem. Op. & Or. of 1/17/97. For Nambe Pueblo, where there was no clear intent, the *Aamodt* court applied the “practically irrigable acreage” standard.

interpreted “Winters” to also apply to either federal or tribal reservations of rights. Federally reserved water rights have been recognized for the Pueblo of San Ildefonso Eastern Reservation, based on a grazing purpose, as well as for the Nambe Pueblo Reservation, based on the purpose "for the use and occupation of the Nambe people", using a PIA standard for future use based on agriculture.

D. State Law Rights

The Aamodt court has ruled that a Pueblo "may also be entitled to a right based in State law if it presents a claim which meets the State law criteria." 160

IV. Rights Under Federal Law

A. Reserved Water Rights for Other Federal Purposes

The doctrine of federal reserved water rights developed over the course of the twentieth century. Simply stated, federal reserved rights are created when the United States sets aside land for specific purposes (thereby withdrawing the land from the general public domain) and there is implied, if not expressed, a concomitant intent to reserve that amount of water required to fulfill the purpose for which the land was set aside. Federal reserved water rights are not created by or limited by State law.

On federal lands (e.g., Forest Service, Park Service), water rights are reserved by the United States for use on those lands. The priority date of federal reserved water rights is the date the United States reserved the land for the particular use. In some cases, the United States may have State law rights under the prior appropriation system, if, for instance, the United States acquires lands with existing water rights.

In United States v. New Mexico,161 the Court stated that federal reserved claims must be “carefully examined” for their “primary purposes” and that reserved water rights should not be implied unless “without the water the purposes of the reservation would be entirely defeated.” In that case, involving federal claims in the Gila National Forest, the Court found that the primary purposes of the national forest did not include fish, wildlife, recreation or aesthetic purposes, but only timber production and watershed protection. In the Jemez y Sangre planning area, most surface water rights pre-date federal reserved rights.


B. The Endangered Species Act

The Endangered Species Act (ESA)\(^{162}\) can play a prominent role in determining the allocation of water, especially of stream and river flows. The ESA was enacted in 1973 and, with limited exceptions, has remained in its current form since then.

The protections of the ESA are triggered by listing of a species as “threatened” or “endangered.” The goal of the Act is to protect threatened and endangered species and the habitat on which they depend.\(^{165}\) The Act’s ultimate goal is to “recover” species so they no longer need protection under the Act.

The ESA provides several mechanisms for accomplishing these goals. The Act makes it unlawful for anyone to “take” a listed species unless an “incidental take” permit or statement is first obtained from the Interior Department.\(^ {164}\) “Take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct.”\(^ {165}\) In addition, federal agencies must use their authority to conserve listed species and must make sure that their actions do not jeopardize the continued existence of listed species or destroy or harm habitat that has been designated as “critical” for such species.\(^ {166}\) Federal agencies are also required to consult with the United States Fish and Wildlife Service to determine whether federal actions or federally sponsored actions will affect or jeopardize threatened or endangered species or critical habitats. Whenever a private or public entity undertakes an action that is “authorized, funded, or carried out,” wholly or in part, by a federal agency, the consultation requirement is triggered and the potential impacts of the undertaking on threatened and endangered species are analyzed by the U.S. Fish and Wildlife Service.\(^ {167,168}\)


\(^{163}\) 16 U.S.C. § 1531(b).

\(^{164}\) 16 U.S.C. §§ 1538, 1539.


\(^{166}\) 16 U.S.C. § 1536.


\(^{168}\) A recent federal case examined the issues of a Fifth Amendment taking (not to be confused with a “take” under the Act) in the context of the ESA. In Tulare Lake Basin Storage District, et al. v. United States of America, 49 Fed. Cl. 313, Fed Cl. 2001 (April 30, 2001) the plaintiffs were California water users within water districts contracting with two major water projects for the right to withdraw and use prescribed quantities of water. \textit{Id. at 315}.

Based on a series of biological opinions, two fish species were determined to be at risk under the ESA: the delta smelt and the winter-run chinook salmon. \textit{Id.} As a result, water out-flows in county water distribution systems were restricted, injuring the plaintiffs. \textit{Id. at 316}.

The plaintiffs brought suit claiming that their contractually-conferrred right to the use of water was taken from them as the result of the water use restrictions under the ESA. \textit{Id. at 313}. The United States Court of Federal Claims held
Of the threatened and endangered species found in the Rio Grande Basin, the protection and recovery of the Southwestern willow flycatcher and the Rio Grande silvery minnow are most likely to affect water planning within this region. In particular, any actions that are likely to reduce water flows in the Rio Grande or harm habitat used by the willow flycatcher will be subject to strict review and possible limitation.

C. The National Environmental Policy Act

The National Environmental Policy Act (NEPA) is another significant federal act dealing with the environmental impact of water use. NEPA dictates the steps that must be taken to analyze environmental impacts of actions; it does not place limits on what actions may be taken. NEPA requires that an analysis of environmental impacts be prepared for all “major federal actions significantly affecting the quality of the human environment.” 169 “Major federal actions” subject to a NEPA analysis include “projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies.” 170

A NEPA analysis can take anywhere from a few months to a few years to complete, depending on the complexity of the project being analyzed. Based on the effects of a proposed action, one of three levels of review will occur: a categorical exclusion (CE), an environmental assessment (EA), or an environmental impact statement (EIS). Generally, federal agency regulations define which categories of actions are eligible for CEs because they typically do not have significant environmental effects, either individually or cumulatively. 171 Where a major federal action is proposed but it is not known whether the action significantly affects the environment, and thus whether the requirement to prepare an EIS is triggered, the agency must prepare an EA. The EA contains a brief description of the project, alternatives to the project and impacts of the project, and concludes with either a finding of no significant impact or the decision to prepare a full EIS.

that the restrictions effected a physical, rather than a regulatory, Fifth Amendment taking of property that required compensation in the case of water users who had contract rights entitling them to the use of a specified quantity of water. Id. In finding a compensable physical taking, the court explained:

In the context of water rights, a mere restriction on use – the hallmark of a regulatory action—completely eviscerates the right itself since Plaintiffs’ sole entitlement is to the use of the water...Unlike other species of property where use restrictions may limit some, but not all of the incidents of ownership, the denial of a right to the use of water accomplished a complete extinction of all value...To the extent, then, that the federal government, by preventing Plaintiffs from using the water to which they would otherwise have been entitled, have rendered the usufructuary right to that water valueless, they have thus effected a physical taking. Id. at 319.


170 40 C.F.R. § 1508.18(a).

171 See 40 C.F.R. § 1508.4.
The NEPA analysis is generally prepared by the federal agency with the greatest involvement in the project. In addition to a “lead agency,” which prepares the environmental analysis, there are often cooperating agencies which have a lesser involvement in the project. State or local agencies can be joint lead agencies with a federal agency. Outside entities, including a project applicant, may submit relevant information, but it is the agency’s responsibility to review and verify all information from outside sources.

Preparation of an EIS allows for public involvement beginning very early in the process. As soon as the decision is made to prepare an EIS, the lead agency must publish a Notice of Intent (NOI) in the Federal Register. After that, the “scoping process” begins, a public process in which the scope of issues to be addressed in the EIS is determined. In the scoping process, the lead agency must invite the participation of “affected Federal, State, and local agencies, any affected Indian Tribe, the proponent of the action, and other interested persons.”

The EIS must analyze the environmental impacts of the proposal, and compare those to the impacts of all reasonable alternatives to the proposal. After a draft EIS is completed, it is circulated to the public and a time period is set for the submission of written comments. Often during this period, or earlier during the scoping process, public meetings are scheduled and publicized in local newspapers to allow members of the public to comment on the proposal and its environmental impacts. The agency must provide written responses to all written comments in the final EIS, and should revise the EIS where appropriate.

After a final EIS is completed, the agency issues a “Record of Decision” which addresses the alternatives and impacts analyzed in the EIS and presents the agency’s decision on the project. The ROD must state whether all practicable means to avoid or minimize environmental harm have been adopted and, if not, explain the reasons for their exclusion. Furthermore, the mitigation measures established in the EIS “shall be implemented by the lead agency or other appropriate consenting agency.”

172 40 C.F.R. § 1501.7.
173 Id.
174 40 C.F.R. § 1501.7(a)(1).
175 40 C.F.R. § 1502.19.
176 40 C.F.R. § 1503.
177 40 C.F.R. § 1503.4.
178 40 C.F.R. § 1505.2(a).
179 40 C.F.R. § 1505.3
After an EIS is complete but before a decision is made on a proposal, an infrequent but important procedure may be invoked: an agency that finds the project might cause unsatisfactory environmental effects may refer the matter to the White House Council on Environmental Quality (CEQ), if efforts to resolve concerns with the lead agency have been unsuccessful. CEQ then reviews the matter and decides whether to let it stand, to attempt to mediate a resolution, or to refer it to the President for action. Over the years, only a handful of referrals to CEQ have been made under these provisions.

Many federal agencies have administrative appeal procedures whereby if someone wants to challenge a project or an EIS, that person must file an administrative appeal to a higher level in the agency. Once those administrative appeals have been exhausted, then interested persons have the option of challenging the legal adequacy of the EIS in court. Such challenges do not usually succeed.

D. Other Federal Laws

There are many other federal laws that affect the exercise of water rights. Foremost among these is the Clean Water Act, which, by placing limits on water pollution, can place limits on how people exercise their water rights. (See Section VII below.) Other federal laws affecting water use and water quality include the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund).

V. San Juan-Chama Project

The San Juan-Chama Project is a federal water project built in the 1960s to transport approximately 110,000 acre-feet of water annually from the San Juan River system to the Rio Grande via the Chama River. The Project includes a number of tunnels under the Continental Divide, as well as Heron Reservoir, where San Juan-Chama water is stored after it has been transported through the tunnels from the San Juan tributaries. The purpose of the Project was to make use of water to which New Mexico is entitled under the Colorado River compacts in the Rio Grande Basin, where water has been in such short supply.

The Bureau of Reclamation has entered into contracts with various entities to provide San Juan-Chama Project water. The City of Albuquerque is by far the largest San Juan-Chama contractor, with a permanent contract for 48,200 acre-feet of water annually. Those in the Jemez y

180 40 C.F.R. § 1504.1.
181 40 C.F.R. § 1504.3.
Sangre planning area with contracts for San Juan-Chama water include: City and County of Santa Fe: 5,605 acre-feet per year; Los Alamos County: 1,200 acre-feet per year; City of Espanola: 1,000 acre-feet per year; Pojoaque Valley Irrigation District: 1,030 acre-feet per year; and Army Corps of Engineers: 5,000 acre-feet per year (to replace evaporation at Cochiti). For purposes of State water administration, use of San Juan-Chama Project water requires an OSE permit through the same permitting processes as for native river flows. However, San Juan-Chama water is exempt from Rio Grande Compact water delivery accounting, as discussed below.

To date, none of these entities has constructed any systems to divert their San Juan-Chama water. The water has been either: (1) stored in reservoirs; (2) used to offset pumping depletion to the river; or (3) leased to other entities, such as the Middle Rio Grande Conservancy District or the federal government (to provide river flows to support the endangered Rio Grande silvery minnow). Both Albuquerque and Santa Fe have plans to construct diversion and treatment systems so that they can use their San Juan-Chama water as part of their public water supply. Extensive federal and State review and permitting will be required for these projects, and the question of how to retain river flows to support the international treaty surface flow delivery obligations or habitat for endangered species will figure significantly in these reviews. Although in the past the State Engineer has never asserted any authority over leasing of San Juan-Chama water, this policy may be changing.

VI. City and County Regulation of Water Use

The availability of an adequate water supply is increasingly a limiting factor on population growth and development expansion. The provision of an adequate water supply poses physical constraints on growth but it may also impose even further constraints as a regulatory mechanism that may be used to manage growth. Both counties and cities have the authority to adopt ordinances conserving and regulating the use of water within their jurisdictions.

For example, subdivision and other land use approvals are increasingly being conditioned upon an adequate showing of water supply. In 1995, the New Mexico legislature amended the State Subdivision Act to require that county subdivision ordinances obligate a subdivider seeking approval of a preliminary plat to show that the subdivider can furnish water of sufficient quantity and quality to meet the needs of the subdivision. As part of the approval process, both the State Engineer Office and the New Mexico Environment Department must review the subdivider's documentation demonstrating satisfaction of these requirements. Likewise, municipalities are charged by State

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185 This use is consistent with the original intent of Congress in approving this transbasin diversion from the Upper Colorado Basin. For example, the Nambe Dam holds surface flows of the Nambe river back from the mainstem for storage. The San Juan-Chama rights off-set the effects of this water storage on the mainstem.

186 § 47-6-11 (F) NMSA 1978 (1995 Repl.).

187 § 47-6-11(F) NMSA 1978 (1995 Repl.)
law with the power to adopt city ordinances governing land platting, planning and zoning.\textsuperscript{188} Specifically, municipal subdivision regulations may govern the extent and manner that water will be provided to the subdivision as a condition of plat approval.\textsuperscript{189}

County and municipal regulations may also be important in the regulation of domestic wells. As discussed above, under the New Mexico Water Code, an applicant may receive a domestic well permit from the State Engineer without acquiring commensurate groundwater rights or retiring offsetting surface water rights.\textsuperscript{190} Because obtaining a domestic water right permit is essentially a ministerial process, it is viewed by many both as a loophole in the regulation of groundwater withdrawals and as an obstacle to the use of water supply as a growth management tool.

Recognizing that further regulation of domestic permits may be necessary, the State Engineer has set a policy of allowing counties or municipalities to implement their own restrictions on the issuance of domestic well permits within their jurisdictions.\textsuperscript{191} Although counties have placed restrictions on domestic wells as part of the subdivision approval process, no county in the planning region has yet imposed a blanket restriction on the drilling of new domestic wells.\textsuperscript{192} Santa Fe County has limited the amount of water that can be created by subdivision or exemption for most lots (i.e., lots smaller than the standard lot size) to one-quarter acre-foot per household.\textsuperscript{193} Santa Fe County also requires customers to disconnect and discontinue use of domestic wells upon hooking

\textsuperscript{188} §§ 3-19-1 to 3-19-12 NMSA 1978; §§ 3-20-1 to 3-20-16 NMSA 1978.

\textsuperscript{189} § 3-19-6(B)(5)(b) NMSA 1978.

\textsuperscript{190} § 72-12-1 NMSA 1978 (2000 Cum. Supp.).

\textsuperscript{191} During the 2001 legislative session, the New Mexico Legislature passed Senate Bill 602 authorizing municipalities to restrict the drilling of new domestic water wells. The legislation gives municipal water providers the authority to deny new domestic well permit applications where the applicant's property line is within 300 feet of the provider's existing water distribution lines and the property is located within the exterior boundaries of the municipality.

A municipality may not deny a new domestic well permit if the total cost to the applicant of extending the municipal water lines, meter and hook-up exceeds the cost of drilling a new well. A municipality declining to authorize a new domestic well must provide domestic water service within 90 days at regular rates. Existing wells are not affected by the legislation.

In order to exercise this authority, a municipality must adopt a well regulation ordinance and file it with the State Engineer's office. An applicant in a municipality with a new well ordinance shall obtain a permit to drill from the municipality subsequent to State Engineer approval. A municipality must notify the State Engineer of its denial of drilling permits and an applicant may appeal a denial to the district court. The legislation creates a new section of Chapter 3 (Municipalities), Article 53 NMSA 1978, and amendments §72-12-1 (groundwater statute) to require the State Engineer to grant a permit for a domestic well within municipal boundaries provided it conform to all applicable municipal ordinances.

\textsuperscript{192} § 3-53-1 NMSA 1978 (1995 Repl.) (giving municipalities authority to regulate water within municipal boundaries).

\textsuperscript{193} See generally Art. III, Section 6 of the Santa Fe County Land Development Code.
up to the county water system. In addition, both the City of Santa Fe and Santa Fe County have used the existence of public water utilities to prohibit drilling of new domestic wells within 200 feet of a utility water line.

Furthermore, municipalities and counties may regulate water use by assuming responsibility for supplying water to their residents. By owning and operating a water utility, a county or municipality may regulate water use, including imposition of conservation measures. Municipalities may exercise their powers of eminent domain to establish or expand water utilities. A municipality "within and without the municipal boundary" may condemn various water supplies, water rights, rights-of-way "or other necessary ownership for the acquisition of water facilities." Counties, like municipalities, may own utilities. County authority arises from statutory law providing that all "counties are granted the same powers that are granted municipalities...[including those powers] necessary and proper to provide for the safety, preserve the health, promote the prosperity and improve the morals, order, comfort and convenience of any county or its inhabitants." Certain class B Counties (i.e., Santa Fe County), are specifically authorized by statute to purchase, own, operate and sell water and sewer utilities. Furthermore, counties are specifically empowered to condemn water rights. Class H Counties (i.e., Los Alamos) also have the power to condemn property for water facilities because they are included in the definition of municipality in the water code.

VII. Interstate Compacts

Streams, rivers, and groundwater ignore political boundaries. Where a river runs through several states, those states often form a compact to determine each state's share. The United States Congress must approve these compacts. New Mexico is a party to several compacts, including the Rio Grande and the Colorado River compacts. In the Jemez y Sangre planning area, the Rio Grande Compact clearly is most significant. The Upper Colorado River and the Colorado River compacts are relevant in that they control the San Juan-Chama Project. The compacts obligate upstream states to deliver specified amounts of water to downstream states. No matter how vested a water right might be, if using it violates a compact, it cannot be used. Compacts can place significant


197 § 4-37-1 NMSA 1978 (1992 Repl.).


199 §§ 72-4-2 – 72-4-12 NMSA 1978 (1997 Repl.).

constraints on the water supply available for use.

The States of New Mexico, Colorado and Texas entered into the Rio Grande Compact in 1938. The deliveries downstream are set under an inflow-outflow schedule. Pursuant to Article IV of the Compact, New Mexico’s obligation to deliver water to the Rio Grande Project at Elephant Butte Reservoir is determined by reference to the index supply at the Otowi gage, located on the river on San Ildefonso Pueblo. Deliveries to New Mexico from Colorado are likewise calculated by upstream gages, pursuant to Article III. Two exemptions to the Compact are noteworthy. First, Article X provides that water imported into the basin is excluded from inflow-outflow calculation, thereby excluding water imported from the San Juan Basin through the San Juan/Chama Diversion Project. Second, Article XVI states: “Nothing in this compact shall be construed as affecting the obligations of the United States of America... to the Indian tribes, or as impairing the rights of the Indian tribes.” Because eight pueblos are located in whole or in part within the planning region, interpretation of this article is important in the water planning process.

It is also noteworthy that storage of water in Nichols and McClure Reservoirs by the City of Santa Fe is controlled in part by the Rio Grande Compact. Under Article VII of the Compact, whenever there is less than 400,000 acre-feet of usable water in Elephant Butte and Caballo reservoirs, storage of water in McClure and Nichols reservoirs, constructed after 1929, is prohibited, unless other water sources are substituted. Further, if New Mexico is in debit status and debit water is stored in those reservoirs, the debit water there is subject to call by the State of Texas.

VIII. Water Quality Law

Federal, state, and tribal laws and regulations govern water quality within the Jemez y Sangre planning region. Nonetheless, most water quality laws have their genesis in a federal act. An understanding of the federal environmental statutes and how they interrelate with State and Pueblo laws is critical to understanding the regulation of water quality in the area.

A. The Clean Water Act

Several federal laws address water quality issues. Clearly, the most significant federal law is the Clean Water Act (CWA). The Act’s objective is to “restore and maintain the chemical, physical and biological integrity” of the waters of the United States. The CWA has several ways

201 § 72-15-23 NMSA 1978 (1997 Repl.)


203 33 U.S.C. §§ 1251 to 1387 (2000). The CWA is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to navigable waters of the United States.

204 33 U.S.C. § 1251(a).
to reach this goal. First, it allows water quality standards for specific segments of surface waters. Second, the CWA makes it unlawful for a person to discharge any pollutant into waters without a permit. Third, it allows for the designation of "Total Maximum Daily Loads" (TMDLs) for pollutants threatening the water quality of stream segments. TMDLs are identified for those waters where an analysis shows that discharges may result in a violation of water quality standards. The TMDL process can be best described as determining and planning a watershed or basin-wide budget for pollutant influx to a watercourse. Groundwater pollution is not specifically addressed by the CWA, and pollution such as mining, agricultural and construction run-off (referred to as "nonpoint sources") are addressed mainly through voluntary management efforts, called "best management practices", and not through regulation. Nonetheless, a recent court decision found that the EPA and states have the power to list and issue TMDLs for waters polluted only by nonpoint sources of pollution.

The CWA allows the EPA to delegate many permitting, administrative, and enforcement aspects to state and tribal governments. For example, states and tribes have the power to adopt water quality standards for surface waters within their jurisdictions. A water quality standard is a measurement of the water itself and does not focus on any single polluter. A water contaminant is any substance that alters the physical, chemical, biological or radiological qualities of the water. A contaminant becomes a pollutant when it exceeds an acceptable concentration or standard. Under the CWA, states are required to adopt water quality standards that protect certain designated uses for each river, stream segment and lake. Tribes meeting certain criteria under the CWA have those same powers for waters within tribal lands. Designated uses include recreation, wildlife habitat, domestic water supply, irrigation and livestock water, or in the case of Indian tribes, culturally significant or sacred uses. The water quality standards must protect the designated use for the surface water at issue. Standards must be reviewed every three years, and as appropriate, be modified or replaced. This process is known as the "Triennial Review."

208 40 C.F.R. § 130.2.
210 33 U.S.C. §§ 1251(g), 1377.
211 § 74-6-2 (A) NMSA 1978 (2000 Repl.).
214 33 U.S.C. § 1313(c)(1).
New Mexico has adopted its own surface water quality standards. In order to understand a water quality standard, it is helpful to look at a particular reach of a river. For example, one segment of the Rio Grande is the “Santa Fe River and its tributaries from Cochiti Reservoir upstream to the outfall of the Santa Fe wastewater treatment facility.” For this reach of the Santa Fe River, the designated uses are irrigation, livestock watering, wildlife habitat, marginal cold water fishery, secondary contact, and warm water fishery. The standards adopted for this reach include pH within the range of 6.6 to 9.0, temperature not to exceed 30 degrees centigrade and fecal coliform not to exceed 1,000/100mL.

A number of Pueblos within the Council planning area have water quality standards for all surface waters within the exterior boundaries of each Pueblo. The Pueblos of Nambe, Pojoaque, San Juan, Santa Clara and Tesuque have each adopted standards similar in form and substance to the State standards.

The CWA also calls for effluent limitations. Very simply speaking, an effluent limitation is a restriction on discharges into surface waters from the “end of the pipe,” or point source. These discharges are regulated through the issuance of National Pollutant Discharge Elimination System permits, NPDES permits. These permits limit the discharge of a variety of pollutants and control the characteristics of the discharge, such as temperature. NPDES permits also regulate storm water discharges entering surface water. Although EPA can delegate the administration of the NPDES program to individual states, it has not been delegated to New Mexico.

B. Other Federal Laws

1. The Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) protects the quality of drinking water in the United States. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish safe standards and requires all owners or operators of public water systems to comply with the standards.

2. The Resource Conservation and Recovery Act

215 20.6.1 NMAC.
216 20.6.1.2105 NMAC.
220 42 U.S.C. § 300f et seq.
The Resource Conservation and Recovery Act (RCRA)\textsuperscript{221} establishes a comprehensive "cradle to grave" system (including generation, transport, treatment, storage, and disposal) for regulating hazardous waste, through a manifest system for tracking hazardous waste and permits for hazardous waste treatment, storage or disposal facilities. RCRA also establishes a framework for corrective action for releases of hazardous waste. RCRA contains federal standards with state implementation to control the management of hazardous waste. New Mexico's program has been authorized by EPA.\textsuperscript{222}

The 1984 amendments to RCRA\textsuperscript{223} enabled EPA to address environmental problems that could result from storing petroleum and other hazardous constituents. RCRA allows EPA to approve state underground storage tank [UST] programs to operate in lieu of the federal program.\textsuperscript{224} NMED manages New Mexico's UST program.\textsuperscript{225}

The regulation of hazardous waste is clearly important to maintaining water quality. By regulating the storage and disposal of hazardous waste, the likelihood of hazardous wastes being released to groundwater are minimized. Likewise, regulating the clean-up of hazardous waste releases through corrective action programs\textsuperscript{226} helps in maintaining the quality of water in which a hazardous waste has been released.

3. The Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as Superfund addresses direct responses to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes prohibitions and requirements concerning closed and abandoned hazardous waste sites; provides for the liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified.

C. Groundwater Standards and Regulations

\textsuperscript{221} 42 U.S.C. §§ 6901-6992K. RCRA was enacted in 1976 as an amendment to the Solid Waste Disposal Act and was significantly amended in 1980 and 1984.

\textsuperscript{222} 42 U.S. C. § 6926(b); New Mexico's Hazardous Waste Act is codified at Chapter 74, Article 4 NMSA 1978.

\textsuperscript{223} 42 U.S.C. § 6991(b).

\textsuperscript{224} 40 C.F.R. 282.81; statutory provisions relating to New Mexico's UST program are found in Chapter 74, Articles 4 and 6, NMSA 1978 (2000 Repl.).

\textsuperscript{225} Id.

\textsuperscript{226} See, e.g., § 74-4-7 NMSA 1978 (2000 Repl.).
As noted above, the CWA focuses primarily on surface water pollution. Therefore, groundwater pollution not caused by hazardous waste is addressed directly by the State and Tribes, pursuant to the New Mexico Water Quality Act,\textsuperscript{227} and its regulations.\textsuperscript{228} In New Mexico, groundwater pollution is caused by a number of sources, including septic tank systems and cesspools, spills and leaks of hazardous materials; solid waste disposal sites; the overuse of fertilizers and pesticides; and mines.

Improperly installed or maintained domestic septic systems can be a source of groundwater pollution in New Mexico. New Mexico's Environmental Improvement Board is charged with writing regulations for liquid waste disposal,\textsuperscript{229} and has promulgated regulations applicable to domestic septic systems.\textsuperscript{230}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{227} § 74-6-1 \textit{et seq.} NMSA 1978 (2000 Repl.).
\item \textsuperscript{228} 20 NMAC 6.2.
\item \textsuperscript{229} § 74-1-8 NMSA 1978 (2000 Repl.).
\item \textsuperscript{230} 20 NMAC 7.3.
\end{itemize}
\end{footnotesize}
Appendix D2

Water Availability Issues
MEMORANDUM

To: Jemez y Sangre Legal Subcommittee

From: Susan Kery; Letty Belin; John Utton

Date: June 22, 2001

Re: Water Availability Issues

TABLE OF CONTENTS

I. Introduction 1
II. Use and Regulation of Domestic Wells 1
   A. Appropriation and Use of Domestic Water 2
   B. State Engineer Prohibition of Domestic Wells 6
   C. Local Government Restrictions 9
      1. Legal Authority 9
      2. County Subdivision Regulations 14
      3. Prospective vs. Retroactive Regulations 17
   D. Transfer into Community Systems 18
III. Transfers Across the Otowi Gage 21
IV. Reuse of Return Flows 26
V. NEPA Process 29
VI. Endangered Species Act Compliance 32

I. Introduction.

The Jemez y Sangre Legal Subcommittee has identified a number of issues that may affect water availability in the region. These issues are (1) the use and regulation of domestic wells; (2) the transfer of water across the Otowi Gage; (3) re-use of return flows; (4) the NEPA process; and (5) Endangered Species Act compliance. Each of these issues is addressed below.

II. The Use and Regulation of Domestic Wells

The use and regulation of domestic wells within the Jemez y Sangre planning region is of
critical importance if it is to realistically plan for use of water within the region. Under the New Mexico Water Code, an applicant may receive a domestic well permit from the State Engineer without acquiring commensurate groundwater rights or retiring offsetting surface water rights.¹ Because obtaining a domestic water right permit is essentially a ministerial process, it is viewed by many both as a loophole in the regulation of groundwater withdrawals and as an obstacle to the use of water supply as a growth management tool.

A. Appropriation and Use of Domestic Water

The starting point for any analysis of domestic wells is the statute governing domestic wells, NMSA 1978, § 72-12-1. That statute states that underground waters are “declared to be public waters and to belong to the public and to be subject to appropriation for beneficial use.” The statute bases the policy allowing for domestic wells on “the varying amounts and time such water is used and the relatively small amounts of water consumed in the watering of livestock, in irrigation not to exceed one acre . . . in household or other domestic use, and in prospecting, mining or construction of public works, highways and roads or drilling operations designed to discover or develop the natural resources of the state.” NMSA 1978, § 72-12-1. The statute then describes the process for applying for a domestic well. Historically, the statute has not given the State Engineer discretion to deny a permit application: “[u]pon the filing of each application. . . the state engineer shall issue a permit.” Id.

The domestic well statute was amended by Senate Bill 602 during the 2001 legislative session to include a provision conditioning the statutory mandate. The new law requires the State Engineer to issue permits “if applications for domestic water use within municipalities conform to all applicable municipal ordinances and an application is made for a municipal permit pursuant to Chapter 3, Article 53 NMSA 1978.” The ramifications of this amendment, which became effective on June 15, 2001, are potentially far-reaching and are discussed below.

The State Engineer has issued regulations pertaining to domestic wells. Groundwater Regulation 1-15 excepts domestic well applications from publication and notice. Groundwater Regulation 1-15.2 limits the amount of water diverted under a Section 72-12-1 permit to three acre-feet per annum. Groundwater Regulation 1-15.3 lists the types of uses allowed under a Section 72-12-1 permit as household and other domestic use for one or more residences; rental units constructed on land owned by the applicant; drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawn that are incidental to a commercial enterprise, provided that the water is not used for any commercial purpose; and livestock water. These latter two regulations pertaining to amount and use are limited by Groundwater Regulation 1-15.8, which states that such amount and uses of water “are subject to such limitations as may be imposed by the courts.”

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2The State Engineer’s authority to adopt regulations is granted pursuant to NMSA 1978, § 72-2-8.

3These regulations are included in the “Rules and Regulations Governing Drilling of Wells and Appropriation and Use of Ground Water in New Mexico (1995).”
The State Engineer requires submission of a form to apply for a domestic well.\(^4\) Section 3 of the form provides for the applicant to check off the particular use of water “not to exceed one acre,” but does not require the applicant to specify with certainty the amount of water requested. The “General Conditions of Approval” applying to domestic well permits capture the essence of the statute and regulations governing domestic wells. The following conditions apply to all domestic well permits:

- The maximum amount of water that may be appropriated under the permit is three acre-feet in any year.

- If the well under the permit is used at any time to serve more than one household or livestock watering, or for drinking and sanitation purposes in conjunction with a commercial operation, the permittee shall notify the State Engineer Office in writing.

- In the event the well is combined with other wells permitted under Section 72-12-1, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed three acre-feet in any year.

- The amount and uses of water permitted are subject to such limitations as may be imposed by the courts or by lawful municipal and county ordinances which are more restrictive than applicable State Engineer Regulations and the conditions of this permit.

It is noteworthy that this last condition does not have a statutory corollary deferring to local ordinances, except for the recent amendment passed in Senate Bill 602. Nonetheless, as discussed below, the general police powers of local governments likely provide such authority.

\(^4\)The form is entitled “New Mexico State Engineer Office Application for Permit to Use Underground Waters In Accordance With Section 72-12-1 New Mexico Statutes.”
Furthermore, the State Engineer has been granted the power to meter domestic wells pursuant to NMSA 1978, §72-12-27, which states that the State Engineer “may require pertinent data to be filed with respect to each well, and may require water produced therefrom to be metered and the volume thereof reported.” Despite this grant of power, the State Engineer has not required state-wide metering of all domestic wells.

Metering is addressed in Groundwater Regulation 1-15.7, which requires all Section 72-12-1 wells to be metered, except for those used for a single household or stock watering. This regulation further states “[i]f two or more wells are connected to the same distribution system, all water diverted from the wells shall be metered with one or more meters and the total diversion from all wells combined shall be limited to three acre-feet per annum.” Groundwater Regulation 1-18.1 re-emphasizes the metering requirement, by stating that “[n]othing herein shall limit the authority of the State Engineer to require a meter as a condition of approval for any permit granted by the State Engineer, except withdrawals for groundwater solely for single household domestic uses or stock watering uses.” Groundwater Regulation 1-18.6 goes on to state “[i]n the exercise of statutory authority to measure the public waters, the State Engineer shall consider Article 1-18 [Requirements for Metering Groundwater Withdrawals] and any court orders regulating the use of ground water. If there is an inconsistency between this article and an order of the court, the court’s order shall control.” Because several adjudications are under way in the basin, the prospect of court orders regulating domestic well rights should be expected, especially one final decrees are entered and basins are administered by priority. In State of New Mexico v. Aamodt (adjudication of Pojoaque/Tesoque/Nambe
stream system), the court has already limited new domestic well uses on an interim basin, even before entry of a final decree. Once a final decree is entered, further restrictions could be placed on domestic wells.

Another area of state regulation of domestic well use concerns well-sharing. Although the State Engineer has not prohibited well-sharing, and in fact, seems to encourage it, there is a restriction of three acre-feet per annum as the amount of water which can be diverted from one domestic well. Again, though, based on the powers granted to municipalities, and on the new language amended to § 72-12-1, municipalities could impose restrictions on well-sharing. Nonetheless, it appears that the better restriction would be on the total amount of water that could be diverted from any one domestic well.

The State Engineer currently allows interconnection of domestic wells, as long as the total amount taken from the combined wells does not exceed three acre-feet per annum. Each domestic well permit as a condition which states that “[i]n the event this well is combined with other wells permitted under Section 72-12-1, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed three acre-feet in any year.”

Groundwater Regulation 1-15.3 lists the types of uses allowed under § 72-12-1 as household and other domestic use for one or more residences; rental units constructed on land owned by the applicant; drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawn that are incidental to a commercial enterprise, provided that the water is not used for any commercial purpose; and livestock water.
B. Legal Basis for State Engineer Prohibition of Domestic Wells.

Given the strong statutory mandate of § 72-12-1 for the issuance of domestic well permits, it is arguable that such wells could be disallowed only when their approval would conflict with the state’s constitutionally-created prior appropriation system. The statute governing domestic wells must be examined in light of the provisions in the New Mexico Constitution. Article XVI, § 2 of the New Mexico Constitution governs the appropriation of water. It states that the "unappropriated water . . . within the state of New Mexico is hereby declared to belong to the public and to be subject to appropriation for beneficial use, in accordance with the laws of the state. Priority of appropriation shall give the better right." (Emphasis added.) Article XVI, § 3 of the New Mexico Constitution describes beneficial use as "the basis, the measure, and the limit of the right to the use of water." These two constitutional provisions, as they relate to groundwater, are codified in NMSA 1978, §§ 72-12-2 and 3. In analyzing the beneficial use provision, the New Mexico Supreme Court has stated that a person is not entitled to receive more water than is necessary for actual use. State v. McLean, 62 N.M. 264, 308 P.2d 83 (1957).

A strong argument can be made that the domestic well statute as applied in certain circumstances is contrary to the constitutional provisions stated above. Pursuant to the New Mexico Constitution, only unappropriated water is available for appropriation and junior rights must be administered according to their priority. For instance, it would be contrary to the prior appropriation doctrine if new or existing junior groundwater users were allowed to cause depletions of connected surface flows, thereby depriving surface diverters from exercising senior priority water rights. Furthermore, it may be contrary to the constitutional
requirement of beneficial use of water to for each domestic well to pump up to three acre-feet per annum, when any use in excess of a small fraction of that amount would likely constitute waste.

The State Engineer has been granted broad powers by the New Mexico Legislature pursuant to NMSA 1978, § 72-2-1 (the State Engineer “has general supervision of waters of the state and of the measurement, appropriation, distribution thereof and such other duties as required.”) See also NMSA 1978, § 72-2-9; Reynolds v. Aamodt, 111 N.M. 4, 800 P.2d 1061 (1990). Because of these powers and the constitutional requirements of beneficial use and protection of priority, the State Engineer may have both the authority and the obligation to prohibit new domestic wells when necessary to comply with the Constitution.

Such a prohibition may be most compelling in the adjudication context. Several of the tributaries in the planning region are subjects of stream system adjudication suits. Once these cases are complete, it is likely that the Court will appoint a water master to oversee the administration of priorities. In instances where recent junior domestic wells are depleting surface flows, the water master and/or the Court may regulate or could prohibit the use of such wells if their use interferes with the exercise of senior water rights. Found in these tributary basins are very old Pueblo and acéquia water rights which would have first priority. Indeed, in the Aamodt case, even before conclusion of the adjudication, the Court has approved or ordered restrictions on the amount of water that may be used from newer domestic wells. Where existing rights afford little or no room for additional withdrawals from an aquifer, persons in need of domestic water may have to purchase water rights to transfer to their property or tie into a community system.
C. Possible Local Government Restrictions and Conditions on Domestic Well Use.

As discussed above, under the New Mexico Water Code, an applicant may receive a domestic well permit from the State Engineer without acquiring commensurate groundwater rights or retiring offsetting surface water rights;\(^6\) nonetheless, county and municipal regulations may also be important in the regulation of domestic wells. In that regard two issues are discussed in this section: (1) do local governments have the legal authority to regulate both the amount and use of domestic wells, including requiring metering of well pumping?; and, (2) Can local regulations be applied only to new wells, or may they be applied retroactively?

1. Legal Authority for Local Regulations.

As discussed above, the State Engineer has adopted a domestic well permit condition providing: “the amount and uses of water permitted under this Application are subject to such limitations as may be imposed by the courts or by lawful municipal and county ordinances which are more restrictive than applicable State Engineer Regulations and the conditions of this permit.” The State Engineer’s policy of deferring to local restrictions is undoubtedly premised on the general police powers of municipalities and counties, which enable them to restrict domestic well pumping. Municipalities’ general police powers are granted by NMSA 1978, § 3-18-1 (“a municipality may protect generally the property of its municipality

and its inhabitants.”) This section confers a police power upon municipalities to protect their inhabitants and a municipality may adopt ordinances for this purpose under the authority of NMSA 1978, § 3-17-1A. City of Hobbs v. Biswell, 81 N.M. 778, 473 P.2d 917, cert. denied, 81 N.M. 772, 473 P.2d 911 (1970).

Likewise, counties are granted general police powers under state law. County authority arises from statutory law providing that all “counties are granted the same powers that are granted municipalities...[including those powers] necessary and proper to provide for the safety, preserve the health, promote the prosperity and improve the morals, order, comfort and convenience of any county or its inhabitants.”7 Although counties have placed restrictions on domestic wells as part of the subdivision approval process, no county in the planning region has imposed regulations that apply generally to the drilling and use of domestic wells.8

In general, it is unlikely that a local government could institute an outright ban on new domestic wells based on police powers alone. Such a prohibition would fall within the domain of the State Engineer administration or the jurisdiction of an adjudication court or special master. Nonetheless, local governments could prohibit new domestic wells, and could possibly phase-out existing wells, as discussed below, based on specific statutory authority or where a reasonable alternative supply is available.

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7 § 4-37-1 NMSA 1978 (1992 Repl.).

8 Santa Fe County has limited the amount of water that can be created by subdivision or exemption for most lots (i.e., lots smaller than the standard lot size) to one-quarter acre-foot per household. See generally Art. III, Section 6 of the Santa Fe County Land Development Code.
For example, municipalities and counties may regulate water use by assuming responsibility for supplying water to their residents. By owning and operating a water utility, a county or municipality may regulate water use, including imposition of conservation measures. Municipalities may exercise their powers of eminent domain to establish or expand water utilities. A municipality “within and without the municipal boundary” may condemn various water supplies, water rights, rights-of-way “or other necessary ownership for the acquisition of water facilities.”

9 Counties, like municipalities, may own utilities. Certain class B Counties (i.e., Santa Fe County), are specifically authorized by statute to purchase, own, operate and sell water and sewer utilities. Further, counties are specifically empowered to condemn water rights. Furthermore, counties are specifically empowered to condemn water rights. Class H Counties (i.e., Los Alamos) also have the power to condemn property for water facilities because they are included in the definition of municipality in the water code.

Both the City of Santa Fe and Santa Fe County have used the existence of public water utilities to prohibit drilling of new domestic wells within 200 feet of a utility water line. The City of Santa Fe has adopted a municipal ordinance which provides for the denial of permit applications for new domestic wells if the applicant’s property boundary is within 200 feet of a water distribution main. Pursuant to this

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11 §§ 72-4-2 – 72-4-12 NMSA 1978 (1997 Repl.).
ordinance, domestic well applications will be granted where the applicant’s property boundary is greater than 200 feet from a water distribution main, provided that the applicant has applied for and received a domestic well permit from the State Engineer and four conditions are satisfied. Conditions include that the well be metered, and monthly usage recorded and reported annually to the City of Santa Fe water division. The other conditions pertain to drilling requirements and easements. The ordinance was passed in 1999 as Ord. #1999-3, § 1, and is codified in the City of Santa Fe Code at 25-1.10. Under the similar Santa Fe County ordinance, customers of the county water utility are required to disconnect and discontinue use of domestic wells upon hooking up to the county water system.¹⁴

A significant recent legislative development is the passage by the 2001 legislature of Senate Bill 602, providing specific statutory authority for local regulation of domestic wells. Effective June 15, 2001, municipalities, and perhaps counties,¹⁵ have the power to restrict by ordinance the drilling of new domestic water wells, except for property zoned agricultural, if the property line of the applicant is within 300 feet of the municipal water distribution lines and the property is located within the exterior boundaries of the municipality. A municipality may not deny a new domestic well permit if the total cost to the applicant of extending the municipal water lines, meter and hook-up exceeds the cost of drilling a new well. A


¹⁵Counties could derive such authority from § 4-37-1 NMSA 1978 (1992 Repl.) (“counties are granted the same powers that are granted municipalities...[including those powers] necessary and proper to provide for the safety, preserve the health, promote the prosperity and improve the morals, order, comfort and convenience of any county or its inhabitants.”)
municipality declining to authorize a new domestic well must provide domestic water service within 90 days at regular rates. Existing wells are not affected by the legislation.

In order to exercise this authority, a municipality must adopt a well regulation ordinance and file it with the State Engineer Office. An applicant in a municipality with a new well ordinance must obtain a permit to drill from the municipality subsequent to State Engineer approval. A municipality must notify the State Engineer of its denial of drilling permits and an applicant may appeal a denial to the district court. The legislation creates a new section of Chapter 3 (Municipalities), Article 53 NMSA 1978, and amends §72-12-1 (groundwater statute) to require the State Engineer to grant a permit for a domestic well within municipal boundaries provided it conforms to all applicable municipal ordinances. The amendment (underlined) reads: “Upon the filing of each application describing the use applied for, the state engineer shall issue a permit to the applicant to so use the waters applied for if applications for domestic water use within municipalities conform to all applicable municipal ordinances and an application is made for a municipal permit pursuant to Chapter 3, Article 53 NMSA 1978.” Thus, effective June 15, 2001, all domestic well applications filed with the State Engineer must conform to municipal ordinances governing domestic wells, as well as to the new statute allowing municipalities to prohibit domestic wells near water lines.

Finally, based again on their broad police powers and their ability to regulate wells, municipalities and counties could impose metering requirements. In particular, the amendment to the domestic well statute (the state engineer shall issue a domestic well permit if applications for domestic water use within
municipalities conform to all applicable municipal ordinances) appears to mandate that the State Engineer recognize any domestic well ordinance, which would include a metering ordinance.

2. **County Regulation of Domestic Wells within Subdivisions.**

The final domestic well issue raised by the legal subcommittee is whether subdivisions can be required to obtain a water right or water supply, other than from § 72-12-1 wells. Again, based on its overall police powers, its power to regulate wells, and the authority to enact ordinances provided for as of June 15, 2001 in § 72-12-1, a municipality can restrict the use of domestic wells within subdivisions.

Such restrictions are already occurring in Santa Fe County, as shown by the domestic well provisions under both its Land Development Code and its Extraterritorial Zoning Ordinance. Article III, Section 6 of the Land Development Code contains multiple references to county domestic well regulation. Subsection 6.2.2 addresses required water rights permits for subdivisions. Specifically, part 6.2.2b requires that for all subdivisions within a critical water basin identified by the Board of County Commissioners, proof of a valid water permit other than domestic wells, be provided prior to plat approval.

Subsection 6.3 of the Land Development Code discusses mandatory community water systems. Part 6.3.1 provides that the drilling or use of individual and/or shared domestic wells is strictly prohibited in a subdivision requiring a community water system. The Code requires community water systems according to the number and size of lots indicated in its subdivision regulation, Article V, Section 9.3. For
instance, community water systems are required in subdivisions from five to twenty-four lots, with lot sizes ranging from less than one acre to 2.5 acres each, in subdivisions from twenty-five to ninety-nine lots (including “cluster developments” of twenty-five or more dwelling units) with lots ranging from less than one acre to ten acres, and in subdivisions of one hundred or more lots, with lot sizes ranging from less than one acre to forty acres. Article V, Table 5.1 & Section 9.3, Santa Fe Land Development Code.

Even when domestic wells are permitted in developments, certain requirements must be met. Subsection 6.4 of the Land Development Codes water addresses availability assessments. Part 6.4.1d requires that for developments where the source of water will be individual domestic wells or shared wells, the applicant must demonstrate a 100-year supply and submit a geohydrologic report in accordance with subsection 6.4.5 or a reconnaissance water availability assessment in accordance with subsection 6.4.6 if applicable.

Subsection 6.4.5 applies to subdivisions containing six or more lots and developments where the source of water will be individual domestic wells or shared wells. The subsection requires that the applicant submit a water availability assessment which includes a geohydrologic report conforming to the requirements of Section 6.4.2 and Table 7.5. Alternatively, Subsection 6.4.6 allows for the submission of a reconnaissance water availability assessment in lieu of a geohydrologic report should a domestic well meet six requirements.

Subsection 6.4.7 sets forth the requirements for water availability assessments for subdivisions of five or fewer lots. Specifically, Part 6.4.7b provides that if the source of water is individual domestic wells,
the applicant must submit the following information as their water availability assessment: (I) at least one well log from an on-site well or from an existing well located within one mile of the property boundary completed in geologic conditions representative of the conditions within the proposed project; (ii) a description of the water bearing formation including a statement of the maximum and minimum depths to water in the subdivision and the basis for these statements; (iii) a statement of the estimated yield of wells in gallons per minute based upon well logs from existing nearby wells; and (iv) any additional information which is required by the Board that will enable it to determine whether or not the subdivider can fulfill the proposals contained in the disclosure statement.

The Santa Fe Extraterritorial Zoning Ordinance Sections 3 and 10 also contain domestic well provisions (Ordinance No. EZA 1999-3). Section 3.3 B provides that in order to obtain a development permit to build within the Extraterritorial Zoning District, applicants must provide proof that a [domestic] well was constructed prior to January 1, 2000, a copy of authorization to connect to a regional water system or a post-January 1, 2000, drillers’ well record proving that the [domestic] well was constructed per Section 10.1. A standards.

Section 10.1 addresses required improvements. Specifically, Section 10.1 A. 1 discusses water supply and states that domestic wells are permitted only where regional water is not available:

Any proposed development shall provide water for the intended use of the development (domestic, commercial/industrial, recreation) either by meeting the standards of lot size and water availability for individual or cluster wells pursuant to Article VII, Section 6 of the County Land Development Code and Sections 3 and 5 of this Ordinance or through installation or extension of a community water system. It is the intent of this ordinance to protect public health and groundwater
quality and encourage conservation by minimizing the number of individual wells by requiring connections to regional water systems and encouraging shared wells where possible. Drilling of any new domestic well is prohibited on lots located within 200 feet of an existing regional water system distribution line when regional water is available. "Available" is defined for the purposes of this section as the regional water system director agrees to provide service and is ready, willing and able to provide water service within 90 days of a written request, and the cost of connecting the point of use per the County Hydrologist's standard specifications. Lots created after January 1, 2000, shall be required to disconnect within 90 days from any domestic well when regional water service becomes available and are required to dedicate a ten (10) foot wide utility easement along all property lines for future potential water distribution lines.

Section 10.1 A.2 (a) states that where new lots are created and the proposed minimum lot size is less that five acres per dwelling unit, connection to or construction of a community water system (or a cluster well water system for four units of less) is required. Part 10.1 A.2. (d) provides well criteria for all permissible wells [including domestic] where regional water is not available (see 10.1A.3.(a) for well criteria).

3. **Prospective vs. Retroactive Application of Local Regulations.**

Whether local governments would be limited to implementing these proposed regulations prospectively, or may impose them retroactively is not clear. A county or municipality has the authority to enact zoning regulations to regulate the use of land within its jurisdiction pursuant to statutory requirements. NMSA 1978, § 3-21-1; see also NMSA 1978 3-21-6. Such regulations are valid exercises of the police powers of each entity. *Miller v. City of Albuquerque*, 89 NM 503, 544 P.2d 665 (1976). Arguably, this authority includes the ability to restrict domestic water use. However, attempts by local governments to
enforce retroactive, rather than prospective, regulations may be subject to legal challenge under the Fifth Amendment Takings Clause, if they go too far.

The general rule is that a regulation that imposes a reasonable restriction on the use of private property will not constitute a ‘taking’ of that property if the regulation is (1) reasonably related to a proper purpose and (2) does not unreasonably deprive the property owner of all, or substantially all, of the beneficial use of his property. The Estate and Heirs of Isabel Sanchez v. County of Bernalillo, 120 NM 395, 397, 902 P.2d 550 (1995)(citing Temple Baptist Church, Inc. v. City of Albuquerque, 89 NM 503, 505, 554 P.2d 665, 667 (1976)).

While the prevailing rule does not address retroactive regulations specifically, such regulations appear valid providing that they satisfy the above rule. For instance, a city or county’s retroactive domestic well metering requirement likely would be permissible as such a requirement would not unreasonably deprive the domestic well user of “all or substantially all” of the beneficial use of her water. Likewise, restrictions on water use in times of drought likely could be imposed on domestic well owners within a local government’s boundaries. On the contrary, retroactively restricting water use below historic use levels may constitute a taking if it were to limit “substantially all” of the domestic user’s water right.

D. Transfer of Domestic Water Rights into a Community System

Another issue is whether a domestic water right can be aggregated and transferred into a common or central water system. There are many examples in New Mexico of the State Engineer approving
transfers of domestic rights into community water systems, such a mutual domestic associations.\textsuperscript{16} However, because the State Engineer Office has at various times stated reservations about this practice and has not established formal procedures governing it, the question arises of the legal basis for this method of creating a community water system.

First, the domestic well statute does not contain any language limiting the transferability of domestic water, nor are there any constitutional provisions which would do so. It is established that a water right is a real property right. See New Mexico Prods. Co. v. New Mexico Power Co., 42 N.M. 311, 77 P.2d 634 (1937) ("A water right is property and held to be real property by most authorities.") Further, there is no language in the water transfer statute that would somehow distinguish a domestic water right as a type of water right that cannot be transferred.

Transfers of groundwater rights are governed by NMSA 1978, §72-12-7. Pursuant to this statute, the owner of a water right may change the location of a well, or change the use of water, but only upon application to the State Engineer and upon showing that the change will not impair existing water rights, will not be contrary to the conservation of water within the state, and will not be detrimental to the public welfare of the state. In reviewing an application to transfer domestic well rights into a community system, the State Engineer will require a showing that the proposal will not result in increased withdrawals from the

\textsuperscript{16} New Mexico law provides for the formation of mutual domestic water associations. NMSA 1978, §§ 53-4-3 and 43-4-1(A). Mutual domestic water associations are formed through the incorporation of any five or more individuals or two or more associations. NMSA 1978, §§ 53-4-2.
stream system. In other words, the current statutory exemption provided by § 72-12-1 may not be used to create a water rights loophole community-wide. The problem can be solved by limiting transfers to the perfected amount of the domestic well and, after the transfer, disallowing further perfection of domestic rights in the same well.

The City of Espanola is seeking to transfer excess domestic rights into its municipal system. The city has enacted an ordinance which “encourages” domestic well owners within the city corporate limits to transfer to the city any unused portion of their domestic well right not used for inside purposes and for which municipal water is being provided. The provision allows for the compensation of domestic well owners pursuant to a specific schedule “to be developed based on amount of acre feet transferred.” Espanola Utility Ordinance Sec. 98-48(f). However, according to the State Engineer transfer policy, the amount of water that a water right holder may transfer is limited to the perfected amount. For instance, if a domestic well owner has a permitted right for three acre-feet of water per year, but has only put 1 acre-foot to beneficial use, the actual water right is 1 acre-foot.

Currently, there is a limited market for domestic water rights, since anyone can apply for one. But, if the State Engineer or a court were to prohibit new domestic wells in fully appropriated basins, or limit the amount of water that can be used pursuant to a domestic well permit, a more active market for domestic water might develop.
III. Transfer of Water Across the Otowi Gage.

The State Engineer’s administration of water right transfers in conformance with the Rio Grande Compact\(^\text{17}\) will affect the availability of water in the planning region. Under the Compact, which was agreed to by the States of New Mexico, Colorado and Texas in 1938, deliveries downstream are set under an inflow-outflow schedule. Deliveries to New Mexico from Colorado are calculated by upstream gages, pursuant to Article III of the Compact. Likewise, pursuant to Article IV, New Mexico’s obligation to deliver water to the Rio Grande Project at Elephant Butte Reservoir is determined by reference to the index supply at the Otowi gage, located on the river on San Ildefonso Pueblo. Based on the quantity of flows measured at Otowi, the Compact establishes a delivery schedule of the amount of native flows that must be delivered to Texas at the Reservoir.\(^\text{18}\)

Because of the Otowi Gage’s role in determining delivery amounts, the State Engineer has a longstanding administrative practice of not permitting a change in point of diversion from one side of the gage to the other, whether permanent or by lease. A change in point of diversion from one side to the other would either increase or decrease flows measured at the gage, thereby altering the delivery requirement downstream, unless a compensating adjustment were agreed to by the three states. In order to avoid

\(^{17}\) § 72-15-23 NMSA 1978 (1997 Repl.)

\(^{18}\) It is important to note that imported San Juan-Chama water is exempt from the Compacts inflow-outflow requirements. Article X provides that water imported into the basin is excluded from inflow-outflow calculation and, therefore may be fully consumed anywhere in the Rio Grande Basin, above Elephant Butte Reservoir.
proposing such adjustments, the State Engineer has simply treated the Rio Grande Basin below and above the gage as two distinct basins. By contrast, the State Engineer has not expressed an official position regarding a change of place of use of a water right from one side to the other.\footnote{The difference in the inquiry is illustrated by the following: An appropriator, piping water from his original point of diversion to another basin, is changing the place of use of his water right. However, he is not changing the point of diversion.}

Because the Otowi Gage is located in the approximate middle of the Jemez y Sangre planning region, a critical question is how administration of water right transfers within, to or from the planning region could affect water availability. Development of water resources has been, and is likely to continue to be, more significant below the gage than above as reflected by a higher price for water rights in the middle valley than on the mainstem in northern New Mexico. Therefore, it is reasonable to assume that any proposed transfer would be from above to below the gage.

Administrative prohibition of transfers across the gage has the effect of protecting against the net loss of water rights in northern New Mexico, including the planning region. Clearly, a ban on changes of points of diversion to the middle valley benefits that portion of the planning region above the gage. Although individual water right holders may not be able to market their rights to the highest bidder, the northern half of the region is likely better off because its existing water resources are not susceptible to predation by and export to the middle valley and because in acquiring additional water rights, it does not have to compete with Albuquerque and other middle valley uses with growing demands.
By contrast, the southern portion of the planning region, in particular the Santa Fe area, may have the distinct disadvantage of being in the middle valley basin or market, when points of diversion and regional distribution systems would more appropriately be located or engineered across the Otowi Gage, or by a combination of diversions along the river, both above and below the gage. What may give the Santa Fe area some relief is the ability to change the place of use, even if not the point of diversion, of a water right from above to below the Otowi Gage. Under that scenario, water diverted above the Otowi Gage could be piped and used south of the gage. Such flexibility would allow for distribution of water within the region where reasonably needed, and would not limit the Santa Fe area to the middle valley market. On the other hand, for those not wishing to see reallocation of water within the region or within northern New Mexico generally, particularly from agricultural to municipal uses, transfers across the gage, even if limited to changes of place of use, could be troubling.

This issue has become important because the City and County of Santa Fe are actively studying the construction of a Rio Grande surface water diversion on San Ildefonso Pueblo lands north of the gage. From the diversion facility, the diverted water would be pumped and used predominantly in the Santa Fe sub-basin, which is south of the gage. Although the use of San Juan-Chama water below the gage is explicitly allowed by Article X of the Compact, the question has arisen whether the place of use of northern, native rights could be changed to the Santa Fe area, even if the diversion point remains above the gage.
Change of place of use of a surface water right is governed by 72-5-23 NMSA 1978. The statute requires that a surface water transfer applicant demonstrate: 1) the transfer will not impair existing water rights; 2) the transfer is not contrary to the conservation of water within the state; and 3) the transfer is not detrimental to the public welfare of the state.²⁰

The non-impairment criteria is satisfied as long as the change in place of use does not impair existing water rights within the basin. To assure such nonimpairment, the policy of the State Engineer is to approve transfer of only the consumptive portion of a surface water right, as opposed to the entire diversionary amount including return flow. This standard is consistent with the transbasin export statute, which provides for the diversion of surface water from one water shed to another.²¹ The statute allows a transbasin transferor to “take and use the same quantity of water, less a reasonable deduction for evaporation and seepage to be determined by the State Engineer.”²²

Satisfaction of the second and third requirements for a valid transfer, conservation and public welfare is less clear, in part because these conditions were made requirements by amendment to state law only recently, in 1985.²³

²⁰§72-5-23 NMSA 1978 (1997 Repl.).

²¹§72-5-26 NMSA 1978 (1997 Repl.).

²²Id.

²³See annotations to §72-5-23 NMSA 1978 (1997 Repl.).
The public welfare requirement, in particular, is largely open-ended and undefined. Of the three transfer criteria, public welfare is the least understood. A precise definition of “public welfare” as it appears in the statute has not been articulated by the state legislature, the courts or the State Engineer. Inter-basin transfers of water from above the Otowi Gage to below the gage will be questioned on public welfare grounds.

During the 2001 state legislative session, two House Joint Memorials were passed on water rights transfers across the Otowi Gage.\textsuperscript{24} House Joint Memorial 6 supports and endorses the continuation of the State Engineer’s policy of prohibiting surface water transfers from above the Otowi Gage to below it. The Memorial’s anti-transfer position is framed by public welfare concerns. The Memorial bases its position on harm to acequia communities, local economies and Compact delivery obligations caused by cross-basin Otowi transfers. Specifically, House Joint Memorial 6 states:

It is detrimental to the public welfare of the state of New Mexico for the Office of the State Engineer or any other relevant state agency to approve water right transfer applications designed to move the point of diversion or place of use of water rights from above the Otowi stream gage to a new point of diversion or a new place of use below the latitude of the Otowi stream gage.

Thus, the Memorial is broader than the current State Engineer policy prohibiting cross-basin changes to points of diversion; rather, the Memorial objects to cross-basin changes to places of use, as well.

\textsuperscript{24}House Joint Memorial 6, 45\textsuperscript{th} Legislature, State of New Mexico, First Session 2001; House Joint Memorial 14, 45\textsuperscript{th} Legislature, State of New Mexico, First Session 2001.
House Joint Memorial 14 is virtually identical to House Joint Memorial 6, and in addition requests the State Engineer formalize a policy of prohibiting water rights transfers from above the latitude of the Otowi Gage to below that latitude.

Although these memorials do not carry the force of law, they do represent a water allocation preference that must be taken into account. If a regional plan protects one portion of the planning region to the detriment of another portion, such a result must be carefully considered. In addition, because restrictions on the use of a water right may unduly interfere with exercise of a property right or could impermissibly infringe on interstate commerce, compliance with the U.S. Constitution’s Fifth Amend protections against takings and the Commerce Clauses protection of interstate commerce must be considered.

IV. Reuse of Return Flows.

An important issue to municipalities, counties and other entities that supply water and treat wastewater is the reuse of return flows. In some instances, such an entity may wish to reuse effluent to meet growing municipal demands. Such reuse will result in less water returning to the river system for use by other users and, consequently, raises questions of whether State Engineer approval is necessary and whether downstream users may oppose the reuse. Another type of reuse occurs when the water user seeks to increase its diversions based upon the amount of return flows it makes to the river system. Diversions may be increased by approval by the State Engineer of a return-flow plan that has the effect of crediting the water user with the return flows and allowing diversions to increase in the same amount.
From a legal standpoint, a right to divert water provides its user with two types of water: the diversion portion, which equals the total amount withdrawn from the stream system, and the consumptive use portion, which is the portion that is consumed. Any amount left over that returns to the stream system by seepage, discharge or even injection is a return flow. Where the State Engineer has already issued a permit to divert a specified quantity of water but with no stated return-flow requirement or consumption limitation, the question remains what portion of the quantity diverted may be consumed.

In the case of Reynolds v. City of Roswell, 99 N.M. 84, 654 P.2d 537 (1982), the New Mexico Supreme Court addressed the issue of the State Engineer’s imposition of a return-flow requirement on a city permit that previously contained no condition. The court held that the requirement was unlawful, concluding that all of the water appropriated under the permit could be used and consumed by the city, as the water was “artificial” water belonging to the city. Id. at 87-88, 654 P.2d at 540-1.

A more complex question concerns a municipality’s ability to reuse waters when some or all of its permits contain discharge requirements. A return-flow condition will typically require a city to return all measurable return flow to the river, including sewage effluent, or may state a percentage of pumping, such as 30 percent, that must be returned to the river system. Under these circumstances, the municipality may not use more than its consumptive use right. But, it could reuse some or all of its effluent if it reduced its pumping correspondingly, so that the total consumptive use did not increase. In other words, by limiting pumping under a permit to the consumptive right and replacing any consequent shortfall in municipal supply with effluent, the municipality could make use of its return flows within its legal authority. Again, as long
as the substitution of effluent did not result in a change in the purpose or place of use of municipal water, no State Engineer approval would be necessary, in most instances.

Alternatively, a city that is discharging and returning to the stream system more effluent than it is required could seek return-flow credits for the discharge. A return-flow credit would allow the city to offset the effects of increased diversions for use elsewhere in its water system. Such offsets could allow additional pumping from municipal wells. State Engineer approval would be required for increased diversions based on return-flow credits.

With respect to challenges by downstream users, the issue is one of title to water once it is released back into a public water course. New Mexico law contains an exemption for artificial waters from the general rule that waters returned to the river system are appropriable public waters. The fact that a city has discharged waters in the past does not extinguish the city’s right to its use and consumption and, further, does not create a right to the waters in another, and a downstream user could not assert a claim against the city to the use of the discharged effluent, absent agreement by the city. See, § 72-5-27 NMSA 1978 (1997 Repl. Pamp.).

Finally, because of the amount of San Juan-Chama water contracted to members of the planning region, it is important to note that this imported supply of water is entirely consumptive. As a result, if a return flow plan demonstrates that after diversion and use some of the water is returning to the system, the State Engineer will approve increased diversions by that amount. For example if a local entity with a contract for 1,000 acre feet per annum of San Juan-Chama water could demonstrate with a return-flow
plan that its consumptive use averaged only 400 acre feet per annum and that the rest returned to the
system, the entity could seek return flow credits for 60% of its diversions. Under this example the State
Engineer may authorize diversions of up to 2,500 acre feet per annum, thereby allowing the diverter to
consume 40% or 1,000 acre feet per annum of the total, with the balance returning to the system. In the
planning region what makes the approval of such a return-flow plan somewhat uncertain is the distance
from the place of use back to the river. A successful plan may have to show that return flows are actually
getting back to the main stem of the river, as opposed to the tributary basins.

V. The NEPA Process.

Questions have been asked concerning the National Environmental Policy Act, or “NEPA.” Under
what circumstances does it apply? What does it require? Who needs to worry about it? We set forth
below a brief summary to answer these questions.

NEPA is a federal law that addresses process, not substance. It dictates the steps that must be
taken to analyze environmental impacts of actions; it does not place limits on what actions may be taken.
In a nutshell, NEPA requires that an analysis of environmental impacts be prepared for all “major federal
actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332. “Major federal
actions” that must be subject to a NEPA analysis include “projects and programs entirely or partly financed,
assisted, conducted, regulated, or approved by federal agencies.” 40 C.F.R. § 1508.18(a). For our
purposes, we can presume that any action that either receives significant federal funding or has federal
agency involvement will have to be subject to review under NEPA.
Jemez y Sangre Legal Subcommittee
Water Availability Issues Memorandum
June 22, 2001
Page 30

For example, it is virtually certain that any construction or development by Santa Fe to bring its San Juan-Chama water from the Rio Grande to the city will be subject to a NEPA analysis. That is because the project will likely be constructed at least partially on federal or Indian land, it will probably be at least partially federally funded, and it will probably need various approvals from federal agencies.

A NEPA analysis can take anywhere from a few months to a few years to complete, depending on the complexity of the project being analyzed. Based on the effects of a proposed action, one of three levels of review will occur: a categorical exclusion (CE), an environmental assessment (EA), or an environmental impact statement (EIS). Generally, federal agency regulations define which categories of actions are eligible for CEs because they typically do not have significant environmental effects, either individually or cumulatively. See 40 C.F.R. § 1508.4. Where a major federal action is proposed but it is not known whether the action significantly affects the environment, and thus whether the requirement to prepare an EIS, is triggered, the agency must prepare an EA. The EA contains a brief description of the project, alternatives to the project and impacts of the project, and concludes with either a finding of no significant impact or the decision to prepare a full EIS.

The NEPA analysis is generally prepared by the federal agency with the greatest involvement in the project. In addition to a “lead agency,” which prepares the environmental analysis, there are often cooperating agencies which have a lesser involvement in the project. State or local agencies can be joint lead agencies with a federal agency. Outside entities, including a project applicant, may submit relevant
Preparation of an EIS allows for public involvement beginning very early in the process. As soon as the decision is made to prepare an EIS, the lead agency must publish a Notice of Intent (NOI) in the Federal Register. 40 C.F.R. § 1501.7. After that, the “scoping process” begins, a public process in which the scope of issues to be addressed in the EIS is determined. Id. In the scoping process, the lead agency must invite the participation of “affected Federal, State, and local agencies, any affected Indian Tribe, the proponent of the action, and other interested persons.” 40 C.F.R. § 1501.7(a)(1).

The EIS must analyze the environmental impacts of the proposal, and compare those to the impacts of all reasonable alternatives to the proposal. After a draft EIS is completed, it is circulated to the public (40 C.F.R. § 1502.19) and a time period is set for the submission of written comments. 40 C.F.R. § 1503. Often during this period, or earlier during the scoping process, public meetings are scheduled and publicized in local newspapers to allow members of the public to comment on the proposal and its environmental impacts. The agency must provide written responses to all written comments in the final EIS, and should revise the EIS where appropriate. 40 C.F.R. § 1503.4.

After a final EIS is completed, the agency issues a “Record of Decision” which addresses the alternatives and impacts analyzed in the EIS and presents the agency’s decision on the project. The ROD must state whether all practicable means to avoid or minimize environmental harm have been adopted and, if not, why not. 40 C.F.R. § 1505.2(a). Furthermore, the mitigation measures established in the EIS “shall
be implemented by the lead agency or other appropriate consenting agency.” 40 C.F.R. § 1505.3.

After an EIS is complete but before a decision is made on a proposal, an infrequent but important procedure may be invoked: an agency that finds the project might cause unsatisfactory environmental effects may refer the matter to the White House Council on Environmental Quality (CEQ), if efforts to resolve concerns with the lead agency have been unsuccessful. 40 C.F.R. § 1504.1. CEQ then reviews the matter and decides whether to let it stand, to attempt to mediate a resolution, or to refer it to the President for action. 40 C.F.R. § 1504.3. Over the years, only a handful of referrals to CEQ have been made under these provisions.

Many federal agencies have administrative appeal procedures whereby if someone wants to challenge a project or an EIS, that person must file an administrative appeal to a higher level in the agency. Once those administrative appeals have been exhausted, then interested persons have the option of challenging the legal adequacy of the EIS in court. Such challenges do not usually succeed.

VI. Endangered Species Act Compliance.

For now, we address requirements of the Endangered Species Act only in relation to the endangered Rio Grande silvery minnow. That is because the silvery minnow is the only aquatic species on the federal endangered species list that exists in waters that might be affected by actions taken within the Jemez y Sangre water planning region. While there are other listed species such as the Southwestern willow flycatcher that could be affected by water planning actions, it is unlikely that the existence of these species will significantly affect large-scale water management or planning actions. It is also possible that
additional species will be listed that affect water management in this region, but because we cannot predict such listing actions, we cannot analyze their ramifications at this time.

Two requirements of the ESA will most directly affect water management in this region. First, is the requirement that federal agencies, in consultation with the U.S. Fish and Wildlife Service, ensure that their actions do not jeopardize the continued existence of endangered species or destroy or harm habitat that has been listed as “critical” for such species. 16 U.S.C. § 1536(a). This requirement is triggered by any and all actions that are “authorized, funded, or carried out by” a federal agency. The second key ESA requirement is its prohibition against the unlawful “take” of a listed species unless an incidental take permit or statement has first been obtained from the Fish and Wildlife Service. “Take” means kill, harm, harass or other similar action detrimental to members of the listed species. It is unlawful to “take” even one member of a listed species without an ESA incidental take permit.

Last summer, the Fish and Wildlife Service designated the entire Rio Grande between Cochiti Dam and a few miles upstream from Elephant Butte Reservoir as critical habitat for the silvery minnow. In January, however, a federal court found that designation to have been unlawful and that the designation would be set aside within 120 days. As of now, the designation is in limbo although it has not yet been formally set aside. Fish and Wildlife Service is reinstituting the critical habitat designation process at this time. While the silvery minnow critical habitat will certainly include that stretch of the Rio Grande, it remains to be seen what will be required for that habitat in the way of specific flow characteristics.

The silvery minnow, which used to live throughout the Rio Grande and Pecos basins, is now
restricted to less than 5% of its original habitat, the mainstem of the Rio Grande between Cochiti Dam and Elephant Butte. In fact, over 95% of the tiny remaining silvery minnow population is located in the 60 mile stretch of river between San Acacia diversion dam and Elephant Butte. Unfortunately, this is the part of the Rio Grande most subject to drying during irrigation season.

This means that any action that would reduce flows in the Rio Grande and thereby increase the possibility of drying episodes is likely to cause “take” of silvery minnow. Given the precarious status of the silvery minnow, we can presume that the Fish and Wildlife Service will be unlikely to grant incidental take permits for actions that will reduce flows in the locations and seasons where river drying is a threat to the silvery minnow. In addition, if and when the Fish and Wildlife Service finally establishes critical habitat for the silvery minnow, that designation may specify minimum flows or other flow characteristics which will govern how the river can be managed.

Because native Rio Grande water is fully appropriated already, it is difficult to think of any actions that might be taken in the planning area that would reduce native water flows in the Middle Rio Grande. If, for example, native water used for agricultural irrigation is transferred to a city for urban use, we can assume the State Engineer will not approve any transfer that will result in reduced river flows.

The action most likely to occur which will threaten to reduce river flows is diversion of San Juan-Chama water from the river for consumption. Santa Fe is one contractor in this region planning to divert and consume its San Juan-Chama water, but we should expect that other contractors will follow suit. In fact, San Juan-Chama contractors plan to divert approximately twice their contracted amount of water and
to return half of that amount back to the river as wastewater.

For a contractor to be certain to obtain approval under the ESA from Fish and Wildlife Service, it would have to plan its diversions in such a way as to be sure that the diversions will not cause or contribute to river drying in places containing silvery minnow.\(^1\) The only certain way of doing this would be to ensure that any reductions in river flow caused by the diversions are offset in the locations critical to silvery minnow survival. Although San Juan-Chama contractors correctly note that their San Juan-Chama water was not originally in the river—it is "supplemental" to the river's natural flows, it is likely that the Fish and Wildlife Service will consider the environmental baseline to be what has occurred over the past thirty years since the Project came on line. Ever since the Project came on line, most San Juan-Chama water has ended up flowing down the Rio Grande through the silvery minnow habitat and helping to keep the silvery minnow alive. The Fish and Wildlife Service is unlikely to sign off on diversion and consumption of San Juan-Chama water which would cause jeopardy to or take of the silvery minnow, given the minnow's current precarious state.

The Fish and Wildlife Service will probably propose measures, in the form of reasonable and prudent alternatives or measures, to avoid jeopardizing the existence of the silvery minnow. What such measures might be and how difficult they might be to accomplish is impossible to say.

\(^1\) In addition, after critical habitat is finally designated, the project must be designed in such a way as not to destroy or adversely modify critical habitat.
It might help to follow the example of Santa Fe’s planned diversion of its San Juan-Chama water through the NEPA/ESA compliance steps to see how this might work. At some point when Santa Fe is developing the project, the NEPA process will begin. Perhaps the Bureau of Indian Affairs will be the lead agency if the diversion itself is to be located on the San Ildefonso Pueblo, or else it would probably be the Bureau of Reclamation. BIA/BOR would begin the EIS process and the public would be involved throughout that process. After issuance of the NOI in the Federal Register, public scoping meetings would probably be held. At some point, BIA/BOR would commence consultation with Fish and Wildlife Service under the ESA, assuming that BIA/BOR determined that the project might adversely affect the silvery minnow. There would be extensive dialogue among Fish and Wildlife, the BIA/BOR and Santa Fe over both the EIS and the ESA consultation. Efforts would be made by all concerned to design the project in such a way as to avoid any potentially adverse effects on the silvery minnow. Since the diversion amounts at issue are relatively small compared to agricultural diversions (and the San Juan-Chama diversions planned by Albuquerque), it is unlikely that a compromise could not be found that satisfies the concerns of each of the parties. Only if those negotiations did not succeed in developing a project that Fish and Wildlife believed would not jeopardize the silvery minnow, would there be a real problem under the ESA.

In that circumstance, Fish and Wildlife would issue a “jeopardy opinion” finding that the project would jeopardize the continued existence of the silvery minnow and presenting a reasonable and prudent alternative that would avoid jeopardy. It would then be up to Santa Fe whether to proceed with the RPA
or drop the project. Santa Fe could not proceed with the project over the objections of the Fish and Wildlife Service.

As this example demonstrates, the question with respect to use of San Juan-Chama water is not exactly whose rights govern – those of the species or those of the contractor? Rather, because Santa Fe (and presumably other San Juan-Chama contractors) will need federal permits and approvals in order to carry out the planned diversions, the question is under what circumstances can those federal permits be granted? The agencies must comply with their obligations under the ESA. So any permits granted will have to be consistent with the ESA.

Furthermore, as noted above, the circumstances under which use of native water from the Rio Grande and its tributaries might be subject to constraints under the ESA is debatable. It is highly unlikely that the State Engineer would approve any water rights transfer that resulted in less water in the river, due to downstream water rights and Compact limitations.

It is, however, also true that the current status quo is killing the silvery minnow, not to mention unlawfully “taking” the minnow. Under the ESA, therefore, one possibility would be that the Fish and Wildlife Service or private citizens might bring suit against persons or entities responsible for that status quo, and seek to change the practices that are pushing the silvery minnow toward extinction. Indeed, this is precisely what the environmental groups who brought Rio Grande Silvery Minnow v. Martinez did in suing the Bureau of Reclamation and the Army Corps of Engineers, claiming that their actions in managing water in the Middle Rio Grande were jeopardizing and unlawfully taking the silvery minnow. Similar claims could
theoretically be brought against other major diverters, especially the Middle Rio Grande Conservancy
District, which is the only diverter between Cochiti and Elephant Butte. The likelihood that such a suit might
be brought against diverters upstream from Cochiti is significantly less, as they are farther away from the
silvery minnow and their diversions are far less than those of MRGCD.
Another possible threat to San Juan-Chama water based on ESA concerns is that the court in *Minnow v. Martinez* could find that the Bureau of Reclamation has obligations in administering the San Juan-Chama Project (i.e., diverting water from the San Juan basin, storing Project water in Heron Reservoir, delivering contracted water to contractors) to ensure that the Project is administered in such a way as to avoid jeopardy to the silvery minnow or to endangered species in the Colorado River system. Conceivably, this could mean that the Bureau might declare “shortages” and not deliver full contract amounts of water, or that water stored in Heron Reservoir might be used to protect the silvery minnow. Either way, a possible result of court application of the ESA to the San Juan-Chama Project could be reduced contract water deliveries.\(^2\) It is difficult to estimate the likelihood of such an outcome – at this point it is simply a possibility.

On balance, we consider it unlikely that Santa Fe or any other San Juan-Chama contractor would be entirely prevented from using its contracted water due to ESA constraints. A more likely possibility is that a contractor’s water deliveries might be somewhat reduced or the certainty of water delivery during dry periods might be reduced, although even these possibilities are pure speculation at this point. A recent federal district court opinion (which will be appealed) has for the first time held that federal water

\(^2\) There is a legal debate over whether San Juan-Chama water can be used for endangered species at all, with most entities (the State of New Mexico, the federal government, San Juan-Chama contractors, and some other states) arguing that Project water cannot be used for endangered species, but must be consumed entirely within the Middle Rio Grande area in New Mexico. However, even if Project water cannot itself be used for endangered species, it can be traded for native water which can be used for endangered species, so the issue remains the same.
contractors may be able to sue the federal government and recover just compensation for the taking of their property if the government fails to deliver the contracted water due to ESA constraints. See Tulare Lake Basin Water Storage Dist. v. United States, No. 98-101 L., 2001 WL 474295 (Fed. Cl. Ct., April 30, 2001).

One other fact bears mentioning on the topic of how the ESA might affect water planning and management in the Jemez y Sangre region. That is the ESA Collaborative Program that has been underway to address ESA compliance with respect to the silvery minnow. The goal of this collaborative process is to come up with a restoration and recovery program for the silvery minnow that will simultaneously provide ESA take coverage to all entities involved. Currently, there is a draft collaborative program which is being circulated among all the negotiating parties in an attempt to reach a consensus on the program and its ten-year budget. If this collaborative process succeeds, it might well remove the ESA cloud from the Middle Rio Grande.
Appendix D3

Area of Origin Protections and Implementation of Critical Management Areas
AREA OF ORIGIN PROTECTIONS AND IMPLEMENTATION OF CRITICAL MANAGEMENT AREAS • EMERGING WATER MANAGEMENT TOOLS FOR PROTECTING PUBLIC WELFARE

By: Susan C. Kery and John W. Utton *

Submitted for Jemez y Sangre Water Planning Council Workshop on Critical Management Areas and Area of Origin
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* The authors are greatly indebted to Susanne Hoffman-Dooley for her work in authoring Preventing Urban Thirst from Wilting Rural Economies: Area-of-Origin Protection in the Western United States (Spring 1996). Ms. Hoffman-Dooley’s work is quoted extensively throughout, and was a very useful resource in examining the complex area of origin issues.
INTRODUCTION

The Jemez y Sangre Water Planning Council is in the final stages of preparing the regional water plan which will address the hydrogeologic, legal, environmental, and public welfare issues of the planning region. In order to fully analyze the public welfare aspect of the regional water plan, two water management tools must be examined. Those tools—Area of Origin protections and the implementation of Critical Management Areas—are the focus of this paper. The purpose of this paper will be to define the two tools, with a particular focus on the public welfare implications of each; and to describe ways in which each tool can be implemented. This paper will not make a recommendation as to whether Area of Origin protections or Critical Management Areas should be implemented in the planning region, since such decision-making must be a collaborative process. Instead, the paper will present options for consideration.

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1 The Jemez y Sangre Planning Region includes the areas between the Jemez Mountains on the west and Sangre de Cristo Mountains on the east. The area includes the northern two-thirds of Santa Fe County, all of Los Alamos County and the southern portion of Rio Arriba County from Embudo to the south.

2 The relationship between regionally water planning and public welfare was succinctly described by two commentators: “Water planning initiatives mandated by New Mexico law had their genesis over thirteen years ago. Their initial intent was to protect New Mexico’s waters from expropriation by other states (notably Texas). In 1987, a federal court... ruled that New Mexico’s attempt to place an embargo on exporting water to other states was unconstitutional. In response, the New Mexico legislature amended several water statutes. The changes included giving the State Engineer authority to deny an application if it is contrary to conservation or detrimental to the public welfare of the state. These criteria, significantly, apply to all appropriations and transfers, not just interstate transactions. The legislature also enacted law establishing a process for locally organized regional water planning. The rationale behind this is that if New Mexicans can prove their own citizens’ need for water, the state can defend itself against attempts by other states to appropriate its water for use elsewhere. The process emphasizes public participation to determine what the public welfare may mean for each region, and how it can be best protected.” Brown and Rivera, Acueducts de Comun: The Tension Between Collective Action and Private Property Rights, IASCP 2000, pp. 15-6.
AREA OF ORIGIN PROTECTIONS

I. Introduction.

In New Mexico, a water right is a property right, which if certain criteria are met, may be transferred and sold. The State Engineer will approve the transfer of a water right from its area of use if such transfer to a new area and/or new purpose of use (1) does not impair existing water rights, (2) is not contrary to the conservation of water, and (3) is not detrimental to the public welfare. Although arguably the public welfare component of the transfer section could be interpreted as allowing the protection of the area from which water is proposed to be transferred to or from, such provision can only be utilized in a case by case basis, as individual transfer applications are before the State Engineer for review.

Historically, cities and towns were located near water supplies. Through growth, these municipalities have exceeded their existing supplies of water, and need to augment their water supplies, often through the purchase and transfer of agricultural water. In New Mexico, as more and more water resources are transferred from agricultural use to urban use, an issue arises as to whether legal restrictions should be implemented to prevent the transfer of water from its “area of origin” to uses outside of such area. In general, such restrictions are opposed by entities seeking to augment their water supplies (such as

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4 NMSA 1978, §§ 72-5-24 (1907), 72-5-3 (1907), 72-12-3 (1931), 72-12-7 (1931).
municipalities), and are looked upon favorably by areas of origin that fear the loss of future water supplies (such as acequias).\textsuperscript{5}

II. **Area of Origin and Public Welfare.**

Area of origin protections are protections put in place to protect values not adequately protected in the free market. As explained by one commentator:

Public values are values that are unlikely to be taken into account by private transactions in the market process. In the water resources area, these values include the unique importance of social and cultural values generated by water, the important instream values that are not protected by property rights, external costs imposed directly on other parties due to jurisdictional boundaries that relieve water users of liability for damage, and the "secondary economic impacts" imposed on areas of origin, especially agricultural communities when agricultural water use is substantially reduced. The importance of these values, in the case of water transfers, implies that market-based transactions in water are likely to generate inefficiencies and inequities to a greater extent than market-based transaction in other sectors of the economy.\textsuperscript{6}

Such public values, of course, are evident in northern New Mexico's acequia communities where the acequia not only plays a part in supporting local agricultural, but also a part in providing for community cohesion through shared maintenance of the ditches and canals, and shared distribution of water. These public values were recognized in a New Mexico trial court decision, where the court denied a transfer of an acequia water right to a commercial use at a ski basin. Although the trial court was reversed on appeal, the court's pronouncement on cultural values exemplifies the conflict inherent in transfer of water away from traditional uses: “It is simply assumed by the applicants that greater economic benefits are more desirable


\textsuperscript{6} *Protecting Public Values in a Water Market Setting: Improving Water Markets to Increase Economic Efficiency and Equity*, 3 U. Denv. L. Rev. 357, 361 (Spring, 2000).
than the preservation of cultural identity. This is clearly not so... I am persuaded that to transfer water rights, devoted to more than a century to agricultural purposes, in order to construct a playground for those who can pay is a poor trade indeed.”

III. Area of Origin Protections.

A number of western states have legislatively enacted area of origin protections. In New Mexico, although there are several existing statutes in place which could perhaps provide limited area of origin protections (see discussion of public welfare, above, and discussion of reservation, below) any full scale area of origin protections would have to be enacted legislatively. Area of origin statutes in other states fall within the following nonexclusive categories: (1) prohibition or restriction against area of origin transfers; (2) the right of recapture and reservation; and (3) compensation. This section will discuss each type of protection, and generally discuss potential advantages and disadvantages of each type of protection.

A. Prohibition or Restriction.

Clearly, the most restrictive area of origin protection would be a blanket prohibition against any transfer out of the area of origin. For example, California prohibits the state from transferring state-held appropriations if the transfer will deprive the county in which the water originates (the exporting county) of water the exporting area needs for development. Other states have imposed restrictive conditions

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7 In re Howard Sleeper et al., Rio Arriba County Cause No. RA 84-53(C) (N.M. Div. 5, First Judicial Dist. April 16, 1985).

8 Deason, Schad, and Sherk, supra, p. 183.

9 An “area of origin” can be defined in several ways—either by basin, sub-basin, or by county.

which, while not blanket prohibitions, have the effect of limiting area of origin exports. These restrictions include obtaining the consent of affected water users prior to the approval of a transfer (which effectively gives a veto right over such transfers); denying transfers if the agricultural base of the area of origin would be significantly affected; and considering the economic loss to the exporting community, and the extent to which the loss will be offset by the new use.\textsuperscript{11}

An absolute prohibition against transferring water out of an area of origin would clearly benefit those who believe that such prohibition is necessary to maintain certain cultural values. Nonetheless, such protection of values must be weighed against the economic benefits which may be obtained by allowing such transfers. As one commentator explained: “Restrictions or prohibition of transfers from a basin of origin is the most extreme form of protection. Restriction is detrimental to economic efficiency which seeks to maximize the total value of output produced from water use. In order to achieve the goal of maximum economic use of water, allocation of available water among different uses and locations should not be static. Flexibility over time to respond to changing demands and values prevents water from being artificially locked into sub-optimal use patterns or marginal uses. Prohibition or restriction of exports of water are detrimental to these goals.”\textsuperscript{12}


\textsuperscript{12} \textit{Id.}, p. 6 (citation omitted).
Further, there is an issue as to whether such a blanket prohibition on transferability would be constitutional. Since a water right is a property right, a state-imposed absolute prohibition on selling such right may be deemed an unconstitutional taking of a property right.13

B. General Permit Requirements.

An area of origin can also be protected against burdensome water exports by conditioning permits allowing such transfers. These permit requirements include (1) establishing rights of recapture or priority rights for areas of origin; (2) reservation of water for areas of origin; and (3) compensation.

1. Rights of Recapture.

A “right of recapture” allows an exporting area to “recapture” transferred water, if it is determined that the transferred water is necessary for economic development of the area of origin. In other words, when the exported water is necessary for beneficial use within the area of origin, it is withdrawn from the importing area and again made available to the area of origin.14 As one commentator notes, in describing a California statute allowing a right of recapture, the “provision greatly benefits local inhabitants because it in effect creates an inchoate priority right in appropriators from the area of origin whenever they need the water, which supersedes the priorities of water exporters.”15

One prominent issue with the right of recapture is the inability of the entity importing the water to have absolute certainty in the long-term availability of the water initially imported. In essence, recapture employs some of the same concepts at work with water banking—that is, it allows for (perhaps) only the

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14 Hoffman-Dooley, supra, p. 19 (citation omitted).
15 Id.
temporary use of water. As such, the uncertainly of the water supply must be reflected in the pricing of water which is subject to recapture.

2. Reservation.

Reserving water for future use within an area of origin is another mechanism which can be used to protect water. Conceptually, through a reservation, a certain amount of water will be set aside, or reserved, for future use of the area of origin. One commentator rightfully questions whether allowing such reservation would conflict with the constitutional requirement in New Mexico and other western states that water be put to beneficial use.\(^{16}\) Nonetheless, New Mexico has essentially allowed the "reservation" of water by allowing for extensions of time in which to put water to beneficial use (and therefore forestall a claim of abandonment or forfeiture),\(^{17}\) and by allowing a 40 year planning window for municipalities and universities.\(^{18}\) Arguably, New Mexico already has a specific reservation statute in place. NMSA 1978, § 72-5-29 (1909) states:

To the end that the waters of the several stream systems of the state may be conserved and utilized so as to prevent erosion, waste and damage caused by torrential floods, and in order that the benefits of the use of such waters may be distributed among the inhabitants and landowners of the country along said streams as equitably as possible without interfering with vested rights, the natural right of the people living in the upper valleys of the several stream systems to impound and utilize a reasonable share of the waters which are precipitated upon and have their source in such valleys and superadjacent mountains, is hereby recognized, the exercise of such right, however, to be subject to the provisions of this article.

\(^{16}\) Id., p. 36; N.M. Const. Art. XVI, Sec. 3.

\(^{17}\) NMSA 1978 §§ 72-5-14 (1907), 72-12-8 (1931).

\(^{18}\) NMSA 1978, § 72-1-9 (1985); Susanne Hoffman-Dooley, supra, p. 36.
Although seemingly allowing for a right of upstream water users to reserve water, such reservation is subject to vested rights. Since stream systems in the planning region are fully appropriated, this statute most likely has limited value for establishing a right of reservation.

3. Compensation.

Compensation allows the area of origin to recoup, in either monetary or other forms, losses caused by the exportation of water. Compensation can take different forms, and several states have enacted compensation statutes. Forms of compensation include monetary compensation,\(^{19}\) payment of lost property taxes,\(^{20}\) development of facilities for local areas and needs,\(^{21}\) development of compensatory storage facilities,\(^{22}\) and payment for property value diminution.\(^{23}\)

Determining adequate compensation must be determined by a careful examination of the impact of the water loss to the exporting community. As one commentator noted, communities absorb the economic costs when water is transferred from the community, often with great hardship. Since these costs are often not taken into account by water buyers and sellers, “it would be appropriate, therefore, from both efficiency and equity viewpoints that buyers and/or sellers make compensatory payments to public

\(^{19}\) For example, Oregon allows transbasin diversions by irrigation districts upon payment of adequate compensation. See, Deason, Schad, and Sherk, supra, p. 184.


\(^{21}\) Hoffman-Dooley, supra., p. 23; Cal. Water Code § 12934, § 12938.

\(^{22}\) Hoffman-Dooley, supra, pp. 24-5 (citations omitted).

\(^{23}\) See Deason, Schad, and Sherk, supra., p. 184.
authorities in the area of origin." Compensation is an attractive area of origin protection, since it allows for the movement of water within the available market, while attempting to protect interests within the area of origin.

IV. Conclusion.

A three part test has been developed to evaluate the impact of water exportation on an area of origin. First, the proposed diversion should be the least expensive water for the importer. Second, the benefits to the importing basin should exceed total costs (costs to the area of origin, plus costs to the importing area of construction, operation, and maintenance.) Third, no one should be made worse off as the result of the diversion. Although a fairly simple test, issues arise in measuring all of the attendant costs to a transfer, both economic and otherwise. In the planning region, it will be critical for all costs to be fairly measured and assessed.

CRITICAL MANAGEMENT AREAS

Another measure of public welfare within the planning region may be the value placed on protecting the groundwater resources of the region. If it is determined that the groundwater resources of the region are or may be inadequate for sustained well protection, the planning region can request that the State Engineer implement a Critical Management Area (CMA) or Areas for the region. A CMA can be implemented through an Order of the State Engineer, whose powers are broad enough to allow such

24 Protecting Public Values in a Water Market Setting: Improving Water Markets to Increase Economic Efficiency and Equity, supra at 371.

implementation. Both the Middle Rio Grande and Estancia Basins have CMAs, which are instructive in examining whether the region, or portions of the region, should be designated as CMAs.

CMAs are generally areas which deserve special attention because the water resources may be inadequate for sustained well production. Therefore, CMAs are used to protect existing water rights and extend the life of the underground water sources within the basin in which the CMA is located. For example, CMAs in the Estancia Basin are defined as all aquifers with average long-term water level declines greater than 1.50 feet per year, or those areas of the valley-fill aquifer with less than 80 feet of remaining saturation by the end of the year 2040. Likewise, in the Middle Rio Grande Administrative Area, the CMA has been defined as an area with excessive water level decline rates, and generally includes areas in which “the model-predicted water level declines, due to the exercise of existing permits, exceed an average rate of 2.5 feet per year through the year 2040; and those areas in which the current observed rate of water level decline exceeds an average of 2.5 feet per year.”

The State Engineer has restricted well drilling in both the Middle Rio Grande and Estancia Basin CMAs. In the Middle Rio Grande CMA, the State Engineer will only accept applications to replace,

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29 Id.

repair, deepen, or supplement an original well, or applications for domestic wells.\textsuperscript{31} In the Estancia Basin, CMAs are protected by (1) denying applications for new appropriations of water, (2) denying additional appropriations within the CMA due to changes in location of well and place and purpose of use from sites located outside the CMA, and (3) limiting water level declines upon the CMAs from proposed non-CMA wells associated with certain types of applications.\textsuperscript{32} Neither the Middle Rio Grande nor Estancia Basin prohibit the drilling of domestic wells within CMAs.

In the planning region, one or more CMAs should be considered if a hydrologic determination is made that the water resources within the region cannot sustain the current level of groundwater development. In making this determination, issues of water quality may need to be considered. Water contamination can potentially cause either a decrease in the available water supply, or make capturing the supply more costly, due to clean-up costs.\textsuperscript{33}

If one or more CMAs are considered for the region, hydrologic modeling will have to be conducted to determine which areas are stressed. Then, a determination must be made as to the level of prohibition demanded for the CMA. Clearly, the State Engineer has broad powers to administer the waters of New Mexico, and as such can order the imposition of one or more CMAs for the region, and restrict water use within the CMA, if such restrictions are hydrologically sound, and needed to protect existing water users, and the groundwater resources within the region. Restrictions could include, but are not limited to,

\textsuperscript{31} \textit{Id.}, p. 7.


\textsuperscript{33} If issues of water quality are considered in developing a CMA, issues of the jurisdiction of the New Mexico Environment Department in establishing a CMA will have to be considered.
prohibiting the drilling of new wells, including domestic and municipal wells; limiting the diversion amounts on new and existing domestic wells; requiring metering of all groundwater diversions, with a mandatory reporting requirement; and regulating septic tanks to decrease groundwater pollution.\textsuperscript{34}