



## **4. Legal Issues Affecting Water Use and Supply in the Mora-San Miguel-Guadalupe Water Planning Region**

Knowledge of the legal constraints that govern the use of water in the Mora-San Miguel-Guadalupe Water Planning Region is needed to understand the available water supply in the region. This section addresses the federal, state, and local legal issues and administrative policies that affect the regional use of water. Information on the physical water supply is included in Section 5.

The planning region encompasses Mora, San Miguel, and Guadalupe Counties. The principal river basins within the planning region are the Pecos River (with its tributary, the Gallinas River) and the Canadian River. There are seven groundwater basins within the region. The four principal basins are the Upper Pecos, Canadian, Tucumcari, and Fort Sumner groundwater basins. The planning region also includes small portions of three other basins: the Roswell, Rio Grande, and Estancia Basins. The locations of these groundwater basins are shown on Figure 4-1.

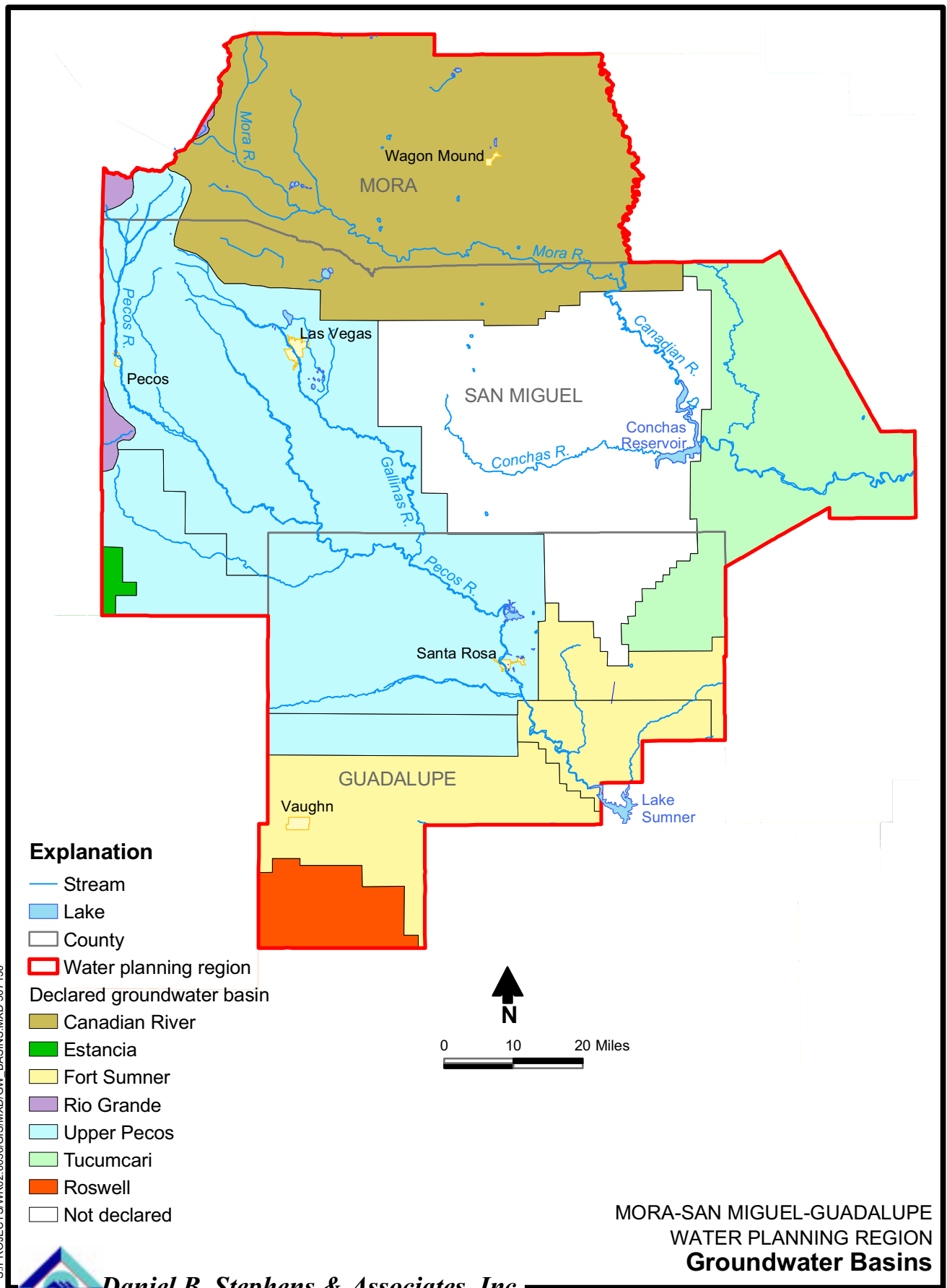
The planning region has specific legal issues that distinguish it from other water planning regions, including the federal Endangered Species Act (ESA) and reserved water rights within federal enclaves, state appropriation of water and the Pueblo rights doctrine, and the regulation of acéquias. These and other issues are discussed in detail in Sections 4.1 through 4.6.

### **4.1 Federal Issues Affecting Water Use and Supply**

Within the planning region, specific federal issues may affect water use and supply. Federal law affecting the availability and apportionment of water in the planning region is discussed in Sections 4.1.1 and 4.1.2. Federal law related to water quality is discussed in Section 4.3.

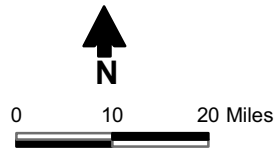
#### **4.1.1 *The Endangered Species Act***

The ESA (16 U.S. C. §§ 1531-1544), first enacted in 1973, can play a prominent role in determining the allocation of water, especially of stream and river flows. This was shown by the



**Explanation**

- Stream
- Lake
- County
- Water planning region
- Declared groundwater basin
- Canadian River
- Estancia
- Fort Sumner
- Rio Grande
- Upper Pecos
- Tucumcari
- Roswell
- Not declared



MORA-SAN MIGUEL-GUADALUPE  
WATER PLANNING REGION  
**Groundwater Basins**

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recent decision of the Tenth Circuit Court of Appeals involving the silvery minnow and the Middle Rio Grande. In *Rio Grande Silvery Minnow v. Keys* (333 F.3d 1109 (10th Cir. 2003)), the Court held that the Bureau of Reclamation (USBR) has discretion to reduce deliveries of available water under its contracts with irrigation districts and cities to make more water available to the silvery minnow to comply with the ESA.

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 (16 U.S. C. § 1531(b)); the 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 (16 U.S.C. §§ 1538, 1539). “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” (16 U.S.C. § 1532(19)). In addition, federal agencies must use their authority to conserve listed species and must ensure 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 (16 U.S.C. § 1536 (2000)). Federal agencies are also required to consult with the U.S. Fish and Wildlife Service (USFWS) 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 USFWS (16 U.S.C. § (2000)).

Two species in the planning region, the Pecos bluntnose shiner and the Arkansas River shiner, are federally listed as threatened. The protection and recovery of these fish are most likely to affect water planning within the region.

The Pecos bluntnose shiner was listed as threatened in 1987 (52 Fed. Reg. 5296 (1987)). Part of its critical habitat is south of the planning region (approximately 10 miles south of Fort



Sumner, extending southward 64 miles). “Critical habitat” identifies geographic areas that contain features essential for the conservation of a threatened or endangered species and may require special management consideration. In listing the bluntnose shiner as threatened, the USFWS found the shiner’s decline to be the result of reduced flow in the main channel of the Pecos River due to water storage, irrigation, and water diversion. In particular, any actions that are likely to reduce water flows of the Pecos River above the critical habitat will be subject to strict review and possible limitation.

The Arkansas River Basin population of the Arkansas River shiner was listed as threatened in 1998 (63 Fed. Reg. 64772 (1998)). Threats to the shiner include habitat loss from construction of water impoundments, reduction of stream flows caused by diversion of surface water or groundwater withdrawals, water quality degradation, and possible inadvertent collection by the commercial bait fish industry. In response to the court’s decision in *N.M. Cattle Grower’s Ass’n v. Norton* (2003 U.S. Dist. LEXIS 18534 [which recognized that economic impacts must be considered in designating critical habitat]), the USFWS has recently proposed designating 1,244 river miles as critical habitat for the Arkansas River shiner, including 300 feet of adjacent riparian areas measured outward from each bank. A portion of the area proposed for critical habitat designation is near Logan Village, although still outside of the planning region. Nonetheless, since the portion of the Canadian River within the region is upstream of the area proposed for critical habitat designation, any impacts on the flows of the Canadian River above the proposed critical habitat designation may have ESA implications and be subject to strict review and possible limitation.

#### **4.1.2 Federal Enclaves and Reserved Water Rights**

Federal enclaves within the planning region consist of land managed by the Forest Service, the Bureau of Land Management, the USFWS, and the National Park Service (Figure B-2, Appendix B).

When federal enclaves exist in a planning region, it is critical to determine if such enclaves have water rights, called “federally reserved” water rights, that must be considered when allocating water use within a region. The “reservation” doctrine, as it applies to federal enclaves, was first



recognized by the United States Supreme Court in *Winters v. United States* (207 U.S. 564 (1908)). The issue in this case was whether the United States, at the time of the creation of the Fort Belknap Indian reservation in Montana, had implicitly reserved, for Indians living on those lands, a water right for future use. The Court upheld the power of the federal government to reserve the waters and exempt them from appropriation under state laws. In *Arizona v. California* (373 U.S. 546 (1963)), a case involving water rights on the Gila River, the Court extended the reservation doctrine to non-Indian federal enclaves. Although it did not specifically discuss whether a specific amount of water was reserved, it did state that the United States “intended to reserve water for the future requirements of . . . the Gila National Forest.” (*Arizona v. California*, 373 U.S. 601 (1963)). However, in *Cappaert v. United States* (426 U.S. 128 (1976)), the Court held that the implied reservation of water doctrine reserves only that amount of water necessary to fulfill the purpose of the reservation and no more (*Cappaert v. United States* (426 U.S. 141 (1976))).

Likewise, in *Mimbres Valley Irrigation Co. v. Salopek* (90 N.M. 410, 564; P.2d 615 (1977)), the United States claimed a reserved right of water in the Gila National Forest for minimum instream flow and recreational purposes. The Court held, upon analysis of the Organic Act of 1897 (16 U.S.C. § 475 [the statute setting forth the purposes for which forests were withdrawn]), that the United States had not reserved water rights in the Gila National Forest for its claimed purposes of instream flow and recreational use (*Mimbres Valley Irrigation Co. v. Salopek*, 90 N.M. 413, 564; P.2d 618 (1977)). Instead, the Court concluded “that the original purposes for which the Gila National Forest was created were to insure favorable conditions of water flow and to furnish a continuous supply of timber. Recreational purposes and minimum instream flow were not contemplated” (*Mimbres Valley Irrigation Co. v. Salopek*, 90 N.M. 413, 564; P.2d 618 (1977)). Therefore, any federally reserved rights within the planning region may only fulfill the purposes of the reservation and no more.

## 4.2 State Issues

Throughout the State of New Mexico, water use is governed by a number of generalized state laws. New Mexico water laws affecting the planning region are found in the New Mexico Constitution, New Mexico Statutes Annotated (NMSA), and the case law interpreting and



applying the existing law. Additional legal constraints include State Engineer regulations governing groundwater and surface water as well as State Engineer policy for administering various groundwater basins throughout the state. A general overview of New Mexico water law is provided in Appendix D1; state legal issues of particular relevance to the planning region are discussed in Sections 4.2.1 and 4.2.2.

#### **4.2.1 *The Appropriation of Water and the Pueblo Rights Doctrine***

The City of Las Vegas (City) owns both groundwater and surface water rights in the planning region; these rights include both “appropriative” and “pueblo” water rights. The City’s pueblo water rights on the Gallinas River have been subject to significant legal challenge, culminating with a recent decision by the New Mexico Supreme Court that potentially limits the City’s pueblo water rights and, therefore, the amount of water the City can appropriate for use within the region.

In 1958, the New Mexico Supreme Court ruled in *Cartwright v. Public Service Company of New Mexico* (66 N.M. 64 (1958)) that the “pueblo rights doctrine” applied to the City, and allowed the City, as a successor to a colonization pueblo, to take as much water from the Gallinas River as necessary for municipal purposes and to expand the right to accommodate increased municipal needs due to population increases. This expansive right to use water could potentially encompass the entire flow of the Gallinas River.

After the *Cartwright* decision, several other judicial decisions shaped the pueblo water rights claims of the City. In 1990, the New Mexico Court of Appeals held that the district court, in the Gallinas River adjudication, must abide by the pueblo rights doctrine articulated in *Cartwright*. In 1992, the district court entered a judgment affirming the City’s pueblo right claim with an 1835 priority date. This judgment was appealed to the Court of Appeals, which issued a decision holding that the City had “no pueblo rights to water” (*State ex rel. Martinez v. City of Las Vegas* (118 N.M. 257 (1994))). The matter was then appealed to the New Mexico Supreme Court, but all proceedings were stayed pending negotiations between the State and the City on the City’s pueblo rights claim. These discussions were unproductive, and the Supreme Court stay of the proceedings was lifted in 2002.



After the lifting of the stay, the Supreme Court issued its decision in 2004, overruling the Cartwright decision (*State ex rel. Martinez v. City of Las Vegas* (2004-NMSC-009)). The Court found the pueblo rights doctrine to be inconsistent with the prior appropriation doctrine and ruled that the City's rights must be determined by prior appropriation based on beneficial use (see Appendix D1 for a description of the prior appropriation doctrine). As stated by the Supreme Court: "Under the [pueblo rights] doctrine, pueblos are not limited by the reasonable time requirement for applying water to beneficial use. . . . This aspect of the pueblo water right intolerably interferes with the goals of definiteness and certainty contemplated by prior appropriation; it envisions either the total loss of use of any amount of water the pueblo might potentially use in the future or temporary appropriations by other users subject indefinitely to elimination of their rights by possible population growth or increased needs of the pueblo" (*State of New Mexico v. City of Las Vegas*, 2004-NMSC-036). The Court further found, based on its colonization grant, that the City has a vested water right to as much water as its predecessor pueblo put to beneficial use within a reasonable time of the initial appropriation, assuming an ability to prove such use (*State of New Mexico v. City of Las Vegas*, 2004-NMSC-047). This water right can be characterized as a "reliance water right."

The Supreme Court did not quantify the City's reliance water right, but sent the case back to the district court to weigh the equities of the matter and quantify the City's reliance water right originating from its colonization grant, based on "the most appropriate equitable remedy that will balance the City's reliance on Cartwright with other water users' reliance on New Mexico's system of prior appropriation" (*State of New Mexico v. City of Las Vegas*, 2004-NMSC-048). The district court instituted procedures to begin the judicial process for quantifying the City's claim. In order to prevent further litigation, the City and the State entered into settlement discussions, which have culminated in the City and the State reaching an agreement (Consent Order: Determining the Water Right of the City of Las Vegas Consistent with the Amended Mandate of June 14, 2004 of the Supreme Court of New Mexico and as Related to the Fifth Judicial District Court's Appropriative Water Rights Judgment of Oct 20, 1997). Entry of the Consent Order is currently pending before the district court and may be subject to *inter se* procedures (the right of water users to challenge the rights of other water users prior to the entry of an adjudication decree). The Consent Order purports to resolve all of the City's water rights claims.



The City's appropriative (beneficial use) water right was initiated by municipal water use for a settlement separate and apart from the original pueblo colony (the settlement and the colony now form the current City of Las Vegas). This water right has been fully adjudicated and allows the City to divert 2,600 acre-feet per year (ac-ft/yr) (1,976 ac-ft/yr depletion) from the Gallinas River with an 1881 priority. These amounts include diversion and depletion in connection with storage in the Peterson and Bradner Reservoirs, which have a total capacity of approximately 500 acre-feet. The City also owns 1,569 ac-ft/yr (diversion) (1,053 ac-ft/yr depletion) of groundwater rights in the Upper Pecos Groundwater Basin with priorities from 1956 to 1963. Finally, the City owns 62 ac-ft/yr (diversion) of surface water rights on the Pecos River for irrigation with an 1848 priority.

#### **4.2.2 Stock Ponds**

Until recently, individuals could impound water for livestock purposes without approval from the State Engineer (Appendix D1). In 2004, however, because of concern about the number of unregulated stock ponds, the New Mexico legislature amended the water code to give the State Engineer jurisdiction over stock ponds. The OSE now requires a permit for new surface water impoundments of any kind, including livestock water impoundments (NMSA § 72-9-3, 19.26.2.14 NMAC). If an application is submitted for a livestock pond located on or fed by a perennial stream, the applicant must comply with the surface water appropriation regulations (NMSA § 72-9-3 (A)(B), 19.26.2.14 (D) NMAC). Therefore, stock ponds will be allowed in a perennial stream system only when unappropriated water is available, a highly unlikely event, given that all surface water in New Mexico is considered fully appropriated. An alternative approach would be for a stock pond applicant to purchase existing water rights and transfer them to the new location and purpose of use.

To address the issue of so-called "livestock ponds" built for aesthetic and recreational purposes, the regulations specifically state that water for livestock does not include "the impoundment of surface or groundwater in any amount for fishing, fish propagation, recreation, or aesthetic purposes" (19.26.2.14 NMAC). Accordingly, a valid water right is now required to fill such structures and an application must be submitted to the OSE and reviewed under the existing surface water regulations or, should the applicant wish to use groundwater to fill a pond,





groundwater regulations. Given the over-appropriation of surface water (and hydrologically connected groundwater) in the region, along with the requirement that such an impoundment not impair existing senior water rights holders, it is unlikely that any such application would be approved. Again, a landowner wishing to construct a fishing or recreational pond could seek instead to purchase an existing water right and transfer it to a new place of use, for a new purpose of use.

#### **4.2.3 Active Water Resource Management**

In December 2004 the OSE adopted Active Water Resource Management (AWRM) regulations (NMAC 19.25.13.1 to 13.49), which establish a general framework for water rights administration in New Mexico. The AWRM legislation creates a policy framework within which the OSE will establish water master districts, appoint water masters for those districts, and develop district-specific water rights administration regulations. The OSE will work locally with the district water master and obtain input from local water rights holders to develop a system for priority administration that addresses district-specific issues and is consistent with the general AWRM regulations (NM OSE, 2004c)

The OSE has established seven priority basins for AWRM (NM OSE, 2004b), one of which includes the Rio Gallinas. In accordance with the regulations, the OSE has created the Rio Gallinas Water Master District, appointed a district water master, and issued draft regulations (discussed in Section 4.5.3.1). The regulations will not become final until adjudication of water rights in the district has been completed (Section 4.5.1.1). The regulations are based on a system of “adaptive management” and are intended to be flexible to allow for modification based on field experience (NM OSE, 2004a)

The AWRM regulations are the subject of much commentary and have even resulted in litigation challenging the validity of the regulations (Petition for Writ of Certiorari - D-0725-CV-05-03, January 3, 2005).



## 4.3 Impacts of Water Quality Laws on Water Use in the Region

Federal and state laws and regulations govern water quality within all planning regions in the state. Nonetheless, most water quality laws have their genesis in federal law. An understanding of the federal water statutes and how they interrelate with state law is critical to understanding the regulation of water quality in the area. In particular, water quality can have a specific impact on the quantity of water within a planning region, since minimum instream flows may be necessary to meet water quality standards.

### 4.3.1 The Clean Water Act

Several federal laws address water quality issues. Clearly, the most significant federal law is the Clean Water Act (CWA) (33 U.S.C. §§ 1251 to 1387 (2002)). The CWA is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which sets the basic structure for regulating discharges of pollutants to navigable waters of the United States. “Navigable waters” has been very broadly defined to include every creek, stream, river, or body of water that may in any way affect interstate commerce, including arroyos or ditches (*Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F.Supp. 1333 (D.C.N.M. 1995)).

The Act’s objective is to “restore and maintain the chemical, physical and biological integrity” of the waters of the United States (33 U.S.C. § 1251(a) (2002)). The CWA meets this goal in several ways: (1) it allows water quality standards for specific segments of surface waters (33 U.S.C. § 1313 (2002)), (2) it makes it unlawful for a person to discharge any pollutant into waters without a permit (33 U.S.C. §§ 1311, 1342 (2002)), and (3) it allows for the designation of total maximum daily loads (TMDLs) for pollutants threatening the water quality of stream segments (33 U.S.C. § 1313(d) (2002)). TMDLs are identified for those waters where an analysis shows that discharges may result in a violation of water quality standards (33 U.S.C. § 1313(d)(1)(C) (2002)). The TMDL process can be best described as determining and planning a watershed or basin-wide budget for pollutant influx to a watercourse.

By enacting the CWA, Congress gave the U.S. Environmental Protection Agency (EPA) broad authority to address water pollution. With this authority, the EPA has developed a variety of



regulations and programs to reduce pollutants entering surface waters. For example, applicable water quality standards, discharge permit requirements, and TMDLs are all defined by regulation.

Groundwater pollution is not specifically addressed by the CWA, and pollution such as mining, agricultural, and construction runoff (referred to as “nonpoint sources”) is addressed mainly through voluntary management efforts, called “best management practices,” and not through regulation (40 C.F.R. § 130.2 (2002)). 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 (*Pronsolino v. Marcus*, 91 F. Supp 2d. 1337, 1356 (N.D. Ca. 2000), affirmed by *Pronsolino v. Nastri*, 291 F.3d 1123 (9th Cir. 2002)).

The CWA also calls for effluent limitations. Simply speaking, an effluent limitation is a restriction on discharges into surface waters from the “end of the pipe” or point source. Point source discharges are regulated through the issuance of National Pollutant Discharge Elimination System (NPDES) permits (33 U.S.C. § 1342 (2002)). These permits limit the discharge of a variety of pollutants and control the characteristics of the discharge, such as temperature. NPDES permits also regulate stormwater discharges entering surface water (33 U.S.C. § 342(p) (2002)). Although the EPA can delegate the administration of the NPDES program to individual states (33 U.S.C. § 1251(b) (2002)), such administration has not yet been delegated to New Mexico (New Mexico is in the process of requesting delegation of this authority from the U.S. EPA).

The CWA allows the EPA to delegate many permitting, administrative, and enforcement aspects to state and tribal governments (33 U.S.C. §§ 1251(g), 1377 (2002)). For example, states and tribes have the power to adopt water quality standards for surface waters within their jurisdictions, and New Mexico has adopted its own surface water quality standards (20.6.4 NMAC). A water contaminant is any substance that alters the physical, chemical, biological, or radiological qualities of the water (NMSA 1978, § 74-6-2 (A) (1967)). 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 (33 U.S.C. § 1313 (2002)). 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 (33 U.S.C. § 1313(c)(1) (2002)). This process is known as the “Triennial Review.”

#### **4.3.2 Safe Drinking Water Act**

The Safe Drinking Water Act (42 U.S.C. § 300f et seq. (2002)) 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 aboveground 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. New Mexico has promulgated drinking water regulations that adopt, in part, federal drinking water standards (20.7.10 NMAC).

#### **4.3.3 Groundwater Standards and Regulations**

As noted in Section 4.3.1, the CWA focuses primarily on surface water pollution. Groundwater pollution not caused by hazardous waste is addressed directly by the State and Tribes, pursuant to the New Mexico Water Quality Act and its regulations (NMSA 1978, § 74-6-1 et seq. (1967); 20.6.2 NMAC). In New Mexico, groundwater pollution originates from a number of sources, including septic tank systems and cesspools, spills and leaks of hazardous materials, solid waste disposal sites, overuse of fertilizers and pesticides, and mines. Except for hazardous and liquid waste, which is regulated separately, these sources are required to have discharge plans under the Water Quality Act and its implementing regulations (NMSA 1978, § 74-6-1 et seq. (1967); 20.6.2 NMAC).

Improperly installed or maintained domestic septic systems are a source of groundwater pollution in New Mexico. The NMED is charged with writing regulations for liquid waste disposal and has promulgated regulations applicable to domestic septic systems (these regulations are currently being revised) (NMSA 1978, § 74-1-8 (1971); 20.7.3 NMAC). The release of hazardous wastes is regulated pursuant to regulations found at 20.4.1 NMAC.



#### 4.4 Acéquia Regulation of Water Use

Acéquias, or community ditches, are ditch systems that are managed by a community and used for irrigation purposes. In New Mexico, acéquia management is governed by statute (NMSA 1978, §§73-2-1 et seq.; NMSA 1978, §§73-2A-1 through 3; NMSA 1978, §§73-3-1). All New Mexicans have the right to construct and use either private or common acéquias (NMSA 1978, §§73-2-1). Members of a community ditch, or acéquia, are not entitled to compensation for the ditch or ditches crossing their respective properties (NMSA 1978, §§73-2-3). After construction, the ditches belong to the acéquia members, and no other person can use the ditch without majority consent from the owners and payment of a share of ditch construction costs proportionate to the amount of water to be used (NMSA 1978, §§73-2-7). Ownership of the ditch is separate from the right to use water that the ditch conveys (*Holmberg v. Bradford*, 56 N.M. 401, 403, 244; P.2d 785, 787 (1952)).

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 (*Snow v. Abalos*, 18 N.M. 681, 691-4, 140; P. 1044, 1047-9 (1914)). Acéquias have three elected commissioners and one *mayordomo*, or superintendent (NMSA 1978, §§73-2-12). Each officer must own an interest in the ditch or a water right (NMSA 1978, §§73-2-12). The officers have the authority to manage the affairs of the acéquia, including contracting and making assessments to provide payment of expenses related to the acéquia, distributing water, supervising ditch maintenance and operation, and collecting fines (NMSA 1978, §§73-2-21).

Acéquias are corporations with the power to sue and be sued (NMSA 1978, §§73-2-1). Moreover, acéquias are considered political subdivisions of the State (NMSA 1978, §§73-2-28). This status is significant because it allows acéquias to condemn land (1969 Op. Att'y. Gen. No. 69-96). It also enables acéquias to receive loans from the ISC for ditch improvements and exempts them from payment of taxes on irrigation works (1964 Op. Att'y. Gen. No. 64-95).

The planning region has numerous acéquias/community ditches and associations (Appendix D2). Consequently, regional water planners must understand the rights of acéquia



members and how they can affect water allocation in the region. Community ditch associations may now pass bylaws requiring that transfers or changes in location of water rights sought by individual water users on a ditch or acéquia be subject to approval by the acéquia or ditch commissioners. The commissioners can deny such transfers if they find that the change would be “detrimental to the acéquia or community ditch or its members” (NMSA 1978, § 73-3-4.1). The statute provides no definition of “detrimental” and it appears that the commissioners have discretion to determine the meaning of this term on a case-by-case basis. Further, the State Engineer is prohibited from approving applications for changes or transfers of water rights in acéquias and community ditch associations if the applicant has not complied with existing rules of the acéquia or association (NMSA 1978, § 72-5-24.1).

Acéquias and community ditches also have the authority to establish a water bank “for the purpose of temporarily reallocating water without change of purpose or use or point of diversion to augment the water supplies available for the places of use served by the acéquias or community ditch” (NMSA 1978, §73-2-55.1). Neither OSE nor ISC recognition nor approval is required for the establishment of acéquia or community ditch water banks. Water rights placed in such a water bank are not subject to forfeiture for non-use, and State Engineer approval is not required for these temporary transfers.

## **4.5 Water Rights Administration and Relevant Lawsuits in the Region**

The principal river basins within the planning region are the Pecos River (with its tributary, the Gallinas River) and the Canadian River. The region covers all or part of seven groundwater basins. The four principal basins are the Upper Pecos, Canadian, Tucumcari, and Fort Sumner groundwater basins. The planning region also includes small portions of three other basins: the Roswell, Rio Grande, and Estancia Basins (Figure 4-1). This section discusses the administration of water rights within the defined basins as well as a number of relevant lawsuits.

### **4.5.1 Pecos River Adjudication and Pecos River Compact**

Water in the Upper Pecos stream system is administered on the basis of various lawsuits to adjudicate water and the Pecos River Compact.



#### *4.5.1.1 Adjudication Lawsuits in the Upper Pecos Stream System*

New Mexico law requires the adjudication of all water use in order to define each user's water right and to gain information needed to maintain a balance between water supply and demand (NMSA 1978, § 72-4-15 (1907)). Adjudication of New Mexico water rights began before the enactment of the Water Code in 1907 and the process is still ongoing. Because of the complexity and difficulty of sorting out the tens of thousands of water right claims across the state, most water rights claims have not been adjudicated.

The process of water rights adjudication begins with a hydrographic survey of a stream system, during which the elements and ownership of each water right in the survey area are determined (NMSA 1978, § 72-4-13 (1907)). The adjudication itself is a lawsuit that determines the extent and ownership of each water right in a specific geographical area, usually a river drainage basin or groundwater basin. Although adjudication is a complex process that usually takes many years to complete, there are advantages to having an adjudicated water right, rather than a declared, permitted, or licensed use. The final court decree removes controversies concerning title to the water right and the validity of the water rights.

The history of both hydrographic surveys and the resulting adjudications in the Upper Pecos stream system is quite complex. Hydrographic surveys of both groundwater and surface water in the area were conducted in 1918, 1921, 1977, 1991, and 1994; the most recent survey began in 2003 and is ongoing. Hydrographic surveys of groundwater were conducted in 1977 and 1989.

Two comprehensive adjudications govern the Upper Pecos stream system. In 1933, the federal court handed down a decree commonly known as the Hope Decree (*United States of America v. Hope Community Ditch et al.*, No. 712 Equity). The Hope Decree, which was based on a hydrographic survey conducted by the United States, defined the rights of many parties to the use of surface water along the Pecos River and some of its tributaries, including the Gallinas River. The State of New Mexico was not a party to the Hope Decree, and the Hope Decree is therefore not binding on the State Engineer (*State of New Mexico v. City of Las Vegas*, 2004-NMSC-009). Accordingly, water rights adjudicated under the Hope Decree are being adjudicated by the State, as described below.



The state adjudication of the Pecos River stream system began in 1956 with the filing of *State of New Mexico ex rel. State Engineer v. Lewis* in the state court in Chaves County (Fifth Judicial District Court, Nos. 20294 and 22600, Consolidated.) The Lewis case was originally initiated to adjudicate groundwater rights in the Roswell Basin, but in 1976, it was expanded to the entire Pecos River stream system, including the Upper Pecos stream system.

The water rights of major groundwater users and Fort Sumner groundwater rights have been adjudicated in the Upper Pecos; domestic groundwater use has not been adjudicated. The current major adjudication activity in the region is the adjudication of Gallinas River surface water rights. Some Gallinas River rights were adjudicated in the Hope Decree, but as New Mexico is not bound by the Decree, the State Engineer is adjudicating these rights. During this adjudication process, the State Engineer is using the Hope Decree as evidence to determine the elements of certain Gallinas River water rights.

The Gallinas River adjudication is based on a five-volume hydrographic survey (NM OSE, 1991). Approximately one-fifth of the rights in Volume 1 have been adjudicated, and the adjudication of the Storrie Project rights (Volume 2) has been completed. Once the Gallinas River adjudication is complete, the adjudication of other surface uses on the Pecos River will likely follow.

The water rights of the City of Las Vegas are the subject of a recent New Mexico Supreme Court decision, as discussed in Section 4.2.1.

#### *4.5.1.2 Pecos River Compact*

In 1948, New Mexico and Texas entered into an agreement called the Pecos River Compact (NMSA 1978 §§ 72-15-19), which was ratified by Congress and the legislatures of New Mexico and Texas. The Compact primarily apportions the waters of the Pecos River between the two states, and to a lesser degree, it provides for allowable storage on the river. It is administered by the Compact Commission, which consists of a chair appointed by the President and one representative each from New Mexico and Texas, appointed by their respective governors.





The Pecos River Compact does not state a specific amount of water that must be delivered to Texas each year. Instead, the Pecos River is administered through an accounting procedure to ensure compliance with Article III of the Compact. This article states that, with the exception of unappropriated flood flows (which are divided equally between the two states), “New Mexico shall not deplete by man’s activities the flow of the Pecos River at the New Mexico-Texas state line below an amount which will give Texas a quantity of water equivalent to that available to Texas under the 1947 condition.” The “1947 condition” is defined in Article II of the Compact as “that situation in the Pecos River as defined in the Report of the Engineering Advisory Committee.” This report provides the technical basis for determining the amount of water available for delivery to Texas under the “1947 condition.” The Compact Commission is charged with determining deliveries of water at the New Mexico-Texas state line.

The Pecos River Compact addresses storage and allows New Mexico and Texas to construct additional reservoir capacity to (1) replace unusable capacity, (2) use salvaged water and unappropriated flood flows, and (3) make more efficient use of water apportioned to each state, but only with the approval of the Compact Commission. Therefore, any increase in storage on the Pecos River System would have to be approved by the State Engineer, the State of Texas, the Carlsbad Irrigation District, and the USBR or U.S. Army Corps of Engineers (USACE).

#### **4.5.2 Canadian River Compact**

The Canadian River Compact, ratified in 1951, allows New Mexico the “free and unrestricted use of all waters originating in the drainage basin of the Canadian River above Conchas Dam (Article IV (a)). Below Conchas Dam, New Mexico has the “free and unrestricted use of water originating below the dam,” but the amount of water that may be stored or impounded is limited to 200,000 acre-feet of conservation storage (Article IV(b)). Any water flowing out of Conchas Dam is considered water originating below the dam and is subject to the 200,000-acre-foot storage limitation. New Mexico stores its Canadian River allocation in Ute Reservoir (*Oklahoma v. New Mexico*, 501 U.S. 221 (1991)). While the Compact limits storage of water below Conchas Dam, it does not require New Mexico to deliver specific amounts of water to the Texas.



### **4.5.3 Administration of Surface Water and Groundwater Within the Region**

The two major stream systems (the Pecos River—with its tributary, the Gallinas River—and the Canadian River) and the various groundwater basins in the planning region are all administered by the New Mexico State Engineer. The administrative policies for each of these stream systems and groundwater basins are outlined in Sections 4.5.3.1 through 4.5.3.8.

#### *4.5.3.1 Administration of the Pecos and Gallinas Rivers*

In the absence of a completed adjudication of the Pecos and Gallinas Rivers (Section 4.5.1.1), and due to concerns over the administration of the Gallinas River in times of drought, the State Engineer created the Gallinas River Water Sub-District and appointed a Gallinas River Water Master in 2003 (19.26.11 NMAC). The Water Master has been charged with the apportionment of the Gallinas River and “shall appropriate, regulate and control the waters . . . so as to prevent waste” (19.26.11.11(A)(2) NMAC). The Water Master has the authority to allocate flows and restrict diversion in accordance with New Mexico law based on priority (19.26.11.9 NMAC). In practice, the Water Master will probably work with water users during times of shortage to come up with an equitable system for administering the water (OSE, 2004a, p. 2).

The State Engineer issued proposed regulations for the Gallinas River (OSE, 2004a [hereinafter referred to as Draft Rio Gallinas Guidelines]). These draft guidelines, which have not been adopted by the State Engineer to date, are described below.

The draft guidelines require installation of meters for all water uses except for wells drilled pursuant to NMSA 1978, § 72-12-1 (domestic wells) (Draft Rio Gallinas Guidelines, §§ III, XI). These draft guidelines also allow the Water Master to refuse water delivery to users who fail to install meters, after reasonable notice (Draft Rio Gallinas Guidelines, § III). Also according to the draft guidelines, “the internal governance of any irrigation system below its point of diversion and its associated water-management operations” can remain within the jurisdiction of such entity (e.g., irrigation district, acéquia commission, etc.) unless such governance is determined by the Water Master to be detrimental to other water users (Draft Rio Gallinas Guidelines, § XIII).



If these guidelines are adopted, individuals who are dissatisfied with the Water Master's actions can make a written objection to the State Engineer (Draft Rio Gallinas Guidelines, § XVI). Once adopted, nothing in the guidelines or in the administration of the guidelines can be used in the course of the adjudication as evidence of a water right (Draft Rio Gallinas Guidelines, Introduction). Finally, the Draft Rio Gallinas Guidelines are meant to be adaptive in nature to accommodate changing circumstances and to allow for the most efficient management of water (Draft Rio Gallinas Guidelines, Introduction).

#### *4.5.3.2 Administration of the Upper Pecos Groundwater Basin.*

The State Engineer has not issued administrative criteria for the Upper Pecos Groundwater Basin. Water right applications in this basin are analyzed on a case-by-case basis, in light of the public welfare, conservation of water within New Mexico, and potential impairment to existing users. The Pecos River stream system is fully appropriated; therefore, new appropriations of groundwater from the Upper Pecos Groundwater Basin are not permitted without the retirement of surface water rights to offset the effects of new groundwater pumping. In reviewing applications to appropriate groundwater, the State Engineer will determine the effects of such appropriation on the related stream system and the amount of stream rights that must therefore be retired to allow the groundwater appropriation. For applications to transfer surface water rights to groundwater rights, the State Engineer will generally limit the amount transferred to the amount of surface water historically used.

#### *4.5.3.3 Administration of the Canadian River and Its Tributaries*

The Canadian River Basin covers approximately the western half of Mora County and a small portion of northern San Miguel County within the planning region. The State Engineer declared the basin in 1973 (19.27.25 NMAC), but has not developed administrative criteria for this basin, and the water rights in Mora and San Miguel Counties have not been adjudicated. Applications to appropriate groundwater are evaluated to determine whether water is available for appropriation and whether granting an application would be in keeping with conservation and the protection of public welfare. Additionally, new appropriations may not impair existing senior water right holders (NMSA 1978, § 72-12-3).



Nevertheless, applications to appropriate water are not likely to be granted because the groundwater in the basin is stream-connected; that is, groundwater pumping close to the river will immediately affect (decrease) streamflow. Groundwater pumping far from the river may not affect the river for many years, but the State Engineer recognizes these long-term hydrologic impacts and manages the basin accordingly. To keep the river system intact, the State Engineer requires offsets; that is, surface water rights must be purchased and retired to offset the effects of any proposed groundwater pumping. If an applicant shows that a proposed groundwater diversion would have no impact to the river at any time, then the State Engineer should approve the application, assuming that the other criteria for approval (no impairment, not contrary to conservation, and not detrimental to the public welfare) are met (NMSA 1978, § 72-12-3).

#### *4.5.3.4 Tucumcari Basin*

The Tucumcari Basin comprises approximately 5,300 square miles in San Miguel, Guadalupe, Curry, Colfax, Union, and Harding Counties. The State Engineer originally declared 177 miles of the basin in 1982 and significantly expanded it in 1998 (19.27.56 NMAC). The extension covered a previously undeclared area within the surface drainage of the Canadian River below Conchas Lake, including Ute Creek. The water rights in the Tucumcari Basin have not been adjudicated.

The State Engineer has no unique administrative criteria for the Tucumcari Basin. Water rights applications are evaluated to determine whether application approval will impair existing water rights, be detrimental to the public welfare, or contrary to the conservation of water (NMSA 1978, § 72-12-3).

#### *4.5.3.5 Fort Sumner Basin*

The State Engineer declared the Fort Sumner basin in 1964 (19.27.31 NMAC). Two expansions, in 1970 and in 1993, extended the basin to its current size of 4,924 square miles. The 1970 expansion included the approximately 168 square miles of the basin that are located within the planning region (Guadalupe County).



The State Engineer has no unique administrative criteria for the Fort Sumner Basin. Water rights applications are evaluated to determine whether application approval will impair existing water rights, be detrimental to the public welfare, or contrary to the conservation of water (NMSA 1978, § 72-12-3).

#### 4.5.3.6 *Roswell Basin*

The main section of the Roswell Underground Water Basin (Roswell Basin) was declared in 1931, with subsequent declarations extending the basin to 10,779 square miles (10.27.50 NMAC). Only a very small portion (238 square miles) of the Roswell Basin is within the planning region (Guadalupe County). The portion of the basin within Guadalupe County was declared by the State Engineer on February 8, 1993.

On February 9, 2005, the State Engineer adopted the *Roswell Basin Guidelines for Review of Water Right Applications* (OSE, 2005 [hereinafter referred to as Roswell Basin Guidelines]). The stated purpose of these guidelines is “to assure the orderly conjunctive management of the surface and underground water resources within the Roswell Basin, while meeting statutory obligations regarding non-impairment to existing water rights, availability of water for transfer, conservation of water within the state, and public welfare of the state” (Roswell Basin Guidelines, § I).

Because the Pecos River is fully appropriated (Roswell Basin Guidelines, § I), all applications within the Roswell Basin to appropriate surface water will be denied (Roswell Basin Guidelines, § III (B)). The Roswell Basin Guidelines prohibit applications for new groundwater appropriations in areas closed to such appropriations; however, the portion of the Roswell Basin within Guadalupe County has not been closed to new groundwater appropriations (Roswell Basin Guidelines, Figure 1; § III (C)).

All applications for new appropriations of groundwater will be reviewed on a case-by-case basis, and an application will be approved if it complies with the laws and regulations governing the State Engineer. In other words, applications for new appropriations will be granted if there will be no impairment to senior users and if the application is not contrary to the conservation of water and is not detrimental to the public welfare (NMSA 1978, § 72-12-3; Roswell Basin



Guidelines, § III C)). Further, an application for a new groundwater appropriation will be conditioned to require that any new impacts to the Pecos River resulting from the granting of the application be fully offset (Roswell Basin Guidelines, § III C)).

The Roswell Basin Guidelines also provide specific criteria for other types of applications relevant to the planning region (e.g., applications for temporary transfers, replacement wells, and supplemental wells, among others.) Although such applications will be reviewed on a case-by-case basis, certain specific criteria may apply. For example, the maximum amount of water that may be granted for an application to supplement an existing water right will be taken as the quantity of water that has been adjudicated, subsequently permitted, or historically applied to beneficial use, whichever is less (Roswell Basin Guidelines, § III (H)).

All wells permitted within the Roswell Basin after the adoption of the Roswell Basin Guidelines will require meters, although this requirement will typically be waived on wells permitted pursuant to NMSA 1978, § 72-12-1 that are used solely for domestic use serving one household or used solely for livestock purposes (Roswell Basin Guidelines, § II (H)).

#### *4.5.3.7 Rio Grande Basin*

The Rio Grande Basin was first declared by the State Engineer in 1956, with numerous extensions of the basin occurring through 1980 (19.27.49 NMAC). Only a very small portion of the basin (59 square miles) is within the planning region (on the far western edge of San Miguel County).

Although the State Engineer has administrative criteria for the Middle Rio Grande (OSE, 2000 [hereinafter referred to as MRGAA Guidelines]), the small area within the region falls outside of the area subject to the MRGAA Guidelines. Therefore, the State Engineer has no unique administrative criteria for the portion of the Rio Grande Basin in the planning region. Since the Rio Grande is fully appropriated (MRGAA Guidelines, p. 1), new surface water appropriations are prohibited by the State Engineer. Groundwater applications will be evaluated to determine whether application approval will impair existing water rights, be detrimental to the public welfare, or be contrary to the conservation of water (NMSA 1978, § 72-12-3). Throughout the Rio Grande Basin, groundwater permittees have been required to obtain valid surface water



rights in an amount sufficient to offset the effects of their diversions on the surface flows of the Rio Grande stream system in order to protect these surface flows from being depleted (MRGAA Guidelines, p. 2).

#### 4.5.3.8 *Estancia Basin*

The Estancia Basin was first declared by the State Engineer in 1950 and was extended in 1975 and 1995 (19.27.30 NMAC). Only a very small portion of the basin (31 square miles) is within the planning region (on the far western edge of San Miguel County).

Because much of the Estancia Basin is experiencing high rates of water level decline, and because significant advances have been made in knowledge of the basin water resources since administrative procedures were first adopted in the Estancia Basin in the 1960s, the State Engineer issued the *Estancia Underground Water Basin Guidelines for Review of Water Right Applications* in 2002 (OSE, 2002, hereinafter referred to as the Estancia Basin Guidelines). These guidelines were developed to protect existing water rights and to extend the life of the water resources within the basin. Consequently, the Estancia Basin Guidelines reflect the 2001 Order of the State Engineer (2001a) to deny new groundwater appropriations and to limit groundwater level declines in the Estancia Basin. Pursuant to the guidelines, applications to appropriate groundwater in the Estancia Basin, filed on or after July 24, 2001, will be denied (Estancia Basin Guidelines, pp. 8-9).

Further, applications filed before July 24, 2001 (1) to increase diversions from a Critical Management Area (CMA), (2) to change the location of a well and place or purpose of use from a non-CMA to a CMA, or (3) that are contrary to statute (i.e., cause impairment, are contrary to conservation, and/or are detrimental to the public welfare) (NMSA 1978, § 72-12-3) will also be denied (Estancia Basin Guidelines, pp. 8-9). The Estancia Basin Guidelines define a CMA as “an area, which deserves special attention because the water resources may be inadequate, for sustained well production” (i.e., all aquifers with long-term water level declines greater than 1.5 feet per year, or areas of the valley-fill aquifer with less than 80 feet of remaining saturation by 2040) (Estancia Basin Guidelines, p. 23). Other types of applications (e.g., supplemental well applications) will be reviewed on a case-by-case basis (Estancia Basin Guidelines, p. 18).



Within the Estancia Basin, all diversion wells permitted after the adoption of the Estancia Basin Guidelines will be metered except wells permitted under NMSA 1978, § 72-12-1 and used solely for livestock. Likewise, all existing wells that will be used in combination with a new permit will be metered (Estancia Basin Guidelines, p. 18).

#### *4.5.3.9 Undeclared Portions of the Region*

A portion (1,652 square miles) of San Miguel and Guadalupe Counties is undeclared by the State Engineer. This means that (1) no permit is required for groundwater pumping in this area and (2) individuals who divert and use groundwater are not protected against impairment from new uses. Although existing users in these areas have a water right based on beneficial use, they do not benefit from the oversight of the State Engineer to protect their existing rights. Individuals who wish to develop new groundwater are free to do so without considering existing uses or obtaining a permit approval.

## **4.6 Major Water Rights Holders in the Region**

Major water rights and irrigated landholders in the planning region were identified from various sources, including the OSE Water Administration Technical Engineering Resource System (WATERS) database, State Engineer documents, and Phase I and II of the Mora-San Miguel regional water plan (Martinez, 1990; Tierra y Montes SWCD, 1994).

### **4.6.1 Groundwater Rights**

Table 4-1 lists the major groundwater holders for each declared basin, as listed in the WATERS database. This list may not reflect all major groundwater right holders, as the WATERS database is continually being updated and may have omissions. For example, changes in ownership and location and purpose of use may not yet be in the database. Therefore, to verify the status of any water right on this list, it is necessary both to consult the WATERS database and to conduct a review of the OSE's water right files in Santa Fe.





**Table 4-1. Major Groundwater Rights Holders by OSE Declared Basin  
Mora-San Miguel-Guadalupe Water Planning Region**

Basin	County	Owner	Acre-Feet
Upper Pecos	San Miguel	Tecolotito Water Utility Coop	75
		East Pecos MDWUA	61.1
		New Mexico Highlands University	58.51
		San Jose MWC	38.7
		Village of Pecos	140.32
		Village of Pecos	343
		City of Las Vegas	1,569.52
	Mora	No records <sup>a</sup>	
	Guadalupe	Petrita Sanchez	122
		Sisneros	71
Houlihan		105	
City of Santa Rosa <sup>b</sup>		1,400	
Roswell Artesian	Guadalupe	No records <sup>a</sup>	NA
Tucumcari	Guadalupe	No records <sup>a</sup>	NA
	San Miguel	No records <sup>a</sup>	NA
Fort Sumner	Guadalupe	Puerto de Luna WUA	73
Canadian River	San Miguel	Marvin Taichert	73
	Mora	J.G. Armstrong	581.4
		La Jara Herefords	246.36
		Jose M. Lopez	217.8
		Tony Duran	159.15
		Mora MDWCA	120
		El Alto MDWCA	64
		Watrous Domestic Water Consumers Assn.	40
		San Antonio de Cleveland MDW	26.1
Guadalupita Mutual Domestic	16.9		
Not specified	Guadalupe	Town of Vaughn <sup>c</sup>	496

Source: NM OSE, 2003, unless otherwise noted

<sup>a</sup> No water rights listed in the OSE WATERS database for this basin and county.

<sup>b</sup> Source: City of Sata Rosa 40-year water plan (ASCG, Inc., 2004)

<sup>c</sup> Source: Town of Vaughn, 2004

WUAI = Domestic Water Users Association

MDWCA = Mutual Domestic Water

Consumers Association

MDW = Mutual Domestic Water



#### **4.6.2 Surface Water Rights**

Most water rights in the region are irrigated surface water rights. Adjudication for most of these rights is ongoing, except for the Storrie Project water rights, which are finalized, and the Canadian River water rights, which are not being adjudicated. Table 4-2 lists the adjudicated rights associated with the Storrie Project. Table 4-3 is a compilation of estimated surface irrigation water use totals for the portions of the Pecos and Canadian River stream systems within the planning region. Although this information is not final, it provides an overview of the numbers and locations of major surface water rights in the region.



**Table 4-2. Storrie Project Adjudicated Water Rights**  
**Page 1 of 2**

Water Right Holder	Total Adjudicated Acreage
David Stanley	64.0
Helen and Timeteo C. Romero	42.6
Pete Mallette and Shirley Mallette	79.7
The Medite Corporation	24.9
Albert Gonzales, Verne G. Gonzales	7.9
Douglas J. McFaul	13.5
Anita Roy, Hoyt Roy	219.5
William J. Boyd, Vicky Lynn Hemmes	4.7
C.E. and Jackie L. Pickett	13.0
Konnie Monty	37.5
Colleen Yates, Kelly Yates Longley, and Schanen Yates Unser	59.0
Pat Melton	202.5
Robert Quintana	494.4
Francis K. Tyson	57.4
Jody Stege, Peter E. Stege	10.4
Richard Rivera	1.8
Leroy P. Padilla	0.9
Robert W. Taylor	3.4
Eddie Madrid	3.6
Gabriel Lopez	2.6
Elfie G. Medina, Tobias Medina	2.1
Maria Gallegos	4.8
Patricia L. Lorch and Ronny H. Lorch	5.7
Gabriel Estrada	8.8
Jose Cordova, Mary Ann Cordova	5.0
Juan A. Sandoval	8.0
Sofia Encinias	0.5
John Bustos	0.4
Viola Garduno-Baca	1.9
Gilbert Montoya	3.7
Max Montoya	5.6
Helen T. Muller and Werner E. Muller	148.1
Antonio Salazar	11.7
James H. Franken	3.8
Lucy R. Garcia and Ruben B. Garcia	4.2
Albert Schultz and Lydia Schultz	72.3



**Table 4-2. Storrie Project Adjudicated Water Rights**  
**Page 2 of 2**

Water Right Holder	Total Adjudicated Acreage
Don Smith	68.6
Greg E. Lucero	5.1
Joseph Herrera	5.1
Celestino Lucero, Josephine M. Lucero	5.1
Leo Roybal	3.8
Albert R. Maez	15.5
Henry W. Higgins	2.7
Gary Lewis	17.1
Phillip S. Romero	10.8
Merle W. Alexander and Juanita Ford Alexander	65.6
Mabel Bibb	142.3
Michael Lucero	30.0
New Mexico Energy, Mineral and Natural Resources Department	82.28 <sup>a</sup>
United States of America	8,672.0 <sup>b</sup>
New Mexico Department of Game and Fish	196.0 <sup>c</sup>
<b>Total Storrie Project delivery obligation to water right holders</b>	<b>12,298.14 ac-ft/yr<sup>d</sup></b>
<b>Total Storrie Project diversion</b>	<b>17,568.77 ac-ft/yr<sup>e</sup></b>

Source: NM OSE, 1997

ac-ft/yr = Acre-feet per year

<sup>a</sup> The New Mexico Energy, Mineral and Natural Resources Department was adjudicated the right to the use of 29.2 acre-feet of water per year (ac-ft/yr) on any of these 82.28 acres as mapped on map sheet 10 (the referenced sheet is assumed to be part of the 1991 hydrographic survey of the Gallinas basin). Because the department's point of diversion is from a well located on its lands, the department does not receive water from the outlet works at Storrie Project's dam, and the 29.2 ac-ft/yr is therefore not included in the maximum amount of water released from Storrie Lake as measured at the outlet works at Storrie Project's dam for delivery to the water rights holders.

<sup>b</sup> The U.S. was adjudicated the right to the use of 7,527.53 ac-ft/yr for all purposes of use, but in no event may the U.S. irrigate more than 3,763.77 acres of this 8,672.0 acres as mapped on map sheets 27, 28, 30, 31, 32, 33, 34, and 35 (the referenced sheets are assumed to be part of the 1991 hydrographic survey of the Gallinas basin). Therefore, 7,527.53 ac-ft/yr is the amount used in calculating the maximum amount of water released each year from the outlet for delivery to the water rights holders.

<sup>c</sup> This department was adjudicated the right to use 392.0 ac-ft/yr on 196.0 acres as mapped on map sheets 32 and 34 (the referenced sheet is assumed to be part of the 1991 hydrographic survey of the Gallinas basin). In addition, McAllister Lake is adjudicated as 132.3 surface acres. Using the net evaporation loss of 34 inches per year or 2.83 ac-ft/yr, the annual maximum consumptive use is 374.41 ac-ft/yr. Therefore, in calculating the maximum amount of water released each year from the outlet works at Storrie Project's dam for delivery to the water rights holders, 766.41 ac-ft/yr (392.0 plus 374.41) is the amount that should be used.

<sup>d</sup> Total 2,002.1 acres of private water rights times a water duty of 2.0 acre-feet per year plus the delivery obligations to the U.S. and New Mexico Department of Game and Fish (see footnotes b and c).

<sup>e</sup> Total delivery obligation divided by off-farm conveyance efficiency of 70%.



**Table 4-3. Estimated Irrigation Water Diversions  
Mora-San Miguel-Guadalupe Water Planning Region  
Page 1 of 2**

Location	Acreage					
	Allowed by Hope Decree	Irrigated in 1923 <sup>a</sup>	Irrigated in 1989 <sup>b</sup>	Inactive in 1989 <sup>b</sup>	Irrigated in 1995 <sup>c</sup>	Irrigated in 2000 <sup>d</sup>
<i>Pecos River Drainage Basin</i>						
Section I. Pecos River, Headwaters to Irwins Gaging Station	108	NE	46	NE	NE	NE
Section II. From Irwins Gaging Station to Mouth of Cow Creek	654	NE	589	NE	NE	NE
Section III. Cow Creek and Bull Creek	310	NE	144	NE	NE	NE
Section IV. Sebedilla Creek (series of small ditches)	18	NE		NE	NE	NE
Section V. Pecos River from Mouth of Cow Creek to San Miguel-Guadalupe County Line	2,615	NE	1,973	NE	NE	NE
Section VI. Tecolote River and Tres Hermanos Creek	491	NE	306	NE	NE	NE
Section VII. Gallinas River	18,920	NE	5,789	NE	NE	NE
Section VIII. Dilia to Guadalupe Gaging Station (Guadalupe County)	1,603	1408	NE	NE	973	1,113
San Miguel County	23,116	NE	8,847	NE	8,950	8,470
Guadalupe County	1,603	1,408	NA	NA	3,765	3,660
<i>Subtotal Pecos River Basin</i>	24,719	NE	8,847	NA	12,715	12,130
<i>Canadian River Drainage Basin</i>						
Section I. Sapello River and Tributaries: Rito San Jose aka Gascon Creek, Maestas Creek, Sparks Canyon Creek, Manuelitas Creek, and Sapello Creek	NA	NA	4,284	1,040	NE	NE
Section I Mora County	NA	NA	428	NE	NE	NE
Section I San Miguel County	NA	NA	3,637	1,040	2,025	1,610

<sup>a</sup> Hydrographic survey

<sup>b</sup> Martinez, 1990

<sup>c</sup> Wilson and Lucero, 1997

<sup>d</sup> Wilson et al., 2003

NE = Not estimated

NA = Not applicable

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**Table 4-3. Estimated Irrigation Water Diversions  
Mora-San Miguel-Guadalupe Water Planning Region  
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4-30

Location	Acreage					
	Allowed by Hope Decree	Irrigated in 1923 <sup>a</sup>	Irrigated in 1989 <sup>b</sup>	Inactive in 1989 <sup>b</sup>	Irrigated in 1995 <sup>c</sup>	Irrigated in 2000 <sup>d</sup>
Section II. Santiago Creek aka Cebolla Creek and Rito Morphé aka Rito San Jose (Mora Co.)	NA	NA	4,335	140	NE	NE
Section III. Rio de la Agua Negra and tributaries to junction of Rio de la Agua Negra and Rio de la Casa (Mora County)	NA	NA	5,121	57	NE	NE
Section IV. Rio de la Casa (Mora County)	NA	NA	1,845	0	NE	NE
Section V. Mora River from the Junction of the Rio de la Casa to Golondrinas (Mora County)	NA	NA	3,828	76	NE	NE
Section VI. Mora River below Golondrinas to County Line (Mora County)	NA	NA	3,847	0	NE	NE
Section VII. Coyote Creek (Mora County)	NA	NA	3,855	295	NE	NE
Section VIII. Ocate Creek and Tributaries (Mora County)	NA	NA	2,864	794	NE	NE
Mora County	NA	NA	26,122	1,362	14,610	14,880
San Miguel County	NA	NA	3,637	1,040	2,780	2,675
Undetermined County	NA	NA	230	0	0	0
<i>Subtotal Canadian River Basin</i>	NA	NA	29,979	2,402	17,390	17,555
Total Mora County	NA	NA	26,122	1,362	14,610	14,880
Total San Miguel County	23,116	NE	12,484	1,040	11,730	11,145
Total Guadalupe County	1,603	1,408	NE	NE	3,765	3,660
<i>Total Planning Region</i>	<i>24,719</i>	<i>NE</i>	<i>38,606</i>	<i>2,402</i>	<i>30,105</i>	<i>29,685</i>

<sup>a</sup> Hydrographic survey

<sup>b</sup> Martinez, 1990

<sup>c</sup> Wilson and Lucero, 1997

<sup>d</sup> Wilson et al., 2003

NE = Not estimated

NA = Not applicable