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Current Legal Issues

This chapter describes the current legal situation with respect to the ownership and use of water in the Middle Rio Grande Region. It is a compilation of key points from two reports:

Overview of Water Law Applicable to the Middle Rio Grande Water Planning Region by Kery et al. (Referred to in this chapter as “Overview” and presented in Supporting Document H-6.)

Legal Issues Specific to the Middle Rio Grande Water Planning Region by Kery et al. (Referred to in this chapter as “Legal Issues” and presented in Supporting Document H-5.)

The following topics are included in this summary:

- Legal Issue Overview
- Water and Land Use Laws Relevant to the Region
- Conflicts among Current Laws and Regulations
- Federal Legal Issues
- Water Quality Standards
- Relevant Lawsuits
- Water Rights Administration Policies Specific to the Middle Rio Grande Region
- Special Districts
- Legal Issues Needing Resolution
- Local Conflicts

For each section there are excerpts from the reports to highlight the key points about pertinent legal issues.

5.1 Legal Issue Overview

The Overview report explains the doctrine of prior appropriation, which is the foundation of water law in New Mexico. The following text extracted from the Overview provide basic information about the doctrine of prior appropriation:

- “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 against subsequent users as long as the appropriator puts the water to beneficial use. . . .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” (Overview, p.2).
- “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” (Overview, p.2).
- “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 in most years more rights to use water exist than is available. When there is insufficient water in a stream to meet the demand, the person with the oldest water right

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can use up to his or her full amount irrespective of geographical location” (Overview, p.2-3). In other words, the amount of “wet water”—or water actually in streams and the ground—does not necessarily equal the amount of “paper water,” which is water that people have a right to use.

5.2 Water and Land Use Laws Relevant to the Region

This section covers water quantity issues, while Section 5.5 covers water quality concerns.

5.2.1 Local Issues

Acéquias and Community Ditch Associations

The Overview report contains an extensive discussion of acéquias and community ditch associations and particularly states, “Within the Region, there are no longer acéquias in the Rio Grande Valley, because all the then-operating acéquias diverting off the Rio Grande joined to form the Middle Rio Grande Conservancy District. Today, there remain a few acéquias or tributaries, most notably on the Rio Jemez” and near Carnuel, or the Tijeras Canyon region.

Cooperative and Mutual Domestic Water Associations

The Overview report examines the purpose and function of cooperative and mutual domestic water associations and the procedures for forming them, explaining, “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. Water cooperatives are also known as mutual domestic water associations and are organized as non-profit organizations” (Overview, p.16).

Water cooperatives are private utilities comprised of five or more individuals or two or more associations. Cooperatives typically sell shares to members and, “may also borrow money, mortgage cooperative assets, or enter into agreements of mutual federation and aid with other cooperatives” (Overview, p.16).

The Overview report also briefly addresses eight other entities that can be created to meet the growing demand for water resulting from increased domestic and industrial development.

Irrigation and Conservancy Districts

Irrigation and conservancy districts, which are the product of a decision by the federal government to take part in the development of water resources in the western United States, are local water entities established to provide communities with irrigation water and water control. The following excerpts from the expansive discussion in the Overview report highlight the role that these districts play:

- “Irrigation districts were created with the sole purpose of delivering irrigation water to their members. Over time, some irrigation districts have evolved to provide hydroelectric power generation, operation of recreational facilities, drainage, flood control, sanitation and municipal and industrial water supply” (Overview, p.21).
- “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” (Overview, p.21).
- “Irrigation district landowners, rather than the districts, own the water rights they exercise” (Overview, p.22).
- The Middle Rio Grande Conservancy District was created by the Conservancy Act of 1923. The purpose of the Act was to improve the economy of the Middle Valley by lowering the water table and providing flood protection and water for irrigation. “The Conservancy Act applies to conservancy districts that are organized for the purpose of flood protection, river control, drainage, water storage for supplementing irrigation needs, construction and maintenance of irrigation

systems, and other improvements for public health, safety, convenience, and welfare. The Conservancy Act is particularly important to the Region because its largest water user is the Middle Rio Grande Conservancy District...” (Overview, p.22).

- “Conservancy districts are political subdivisions of the State and corporate bodies with all the powers of public or municipal corporations” (Overview, p.23).
- “Conservancy districts have unusually broad powers over water ownership and management within their boundaries. First, conservancy districts are empowered to own water rights...This is in contrast to acéquias, which cannot own water rights. Second, a district’s rights are not subject to loss by prescription, adverse possession, non-use, or forfeiture. Third, conservancy districts have the ‘specific and unquestioned power’ to properly allocate water for the purposes most essential to the welfare and economy of landowners within the district. Conservancy districts can distribute and allocate water available for irrigation in the manner they deem reasonable and proper” (Overview, p.25).

Offset Requirement

See Section 5.7 Ground Water Basin Criteria.

5.2.2 State Laws

As discussed earlier, the doctrine of prior appropriation governs the use of water in New Mexico. Under the New Mexico Water Code, which codified the doctrine of prior appropriation, the State Engineer has the authority to issue permits recognizing a person’s or an entity’s right to use surface or groundwater. Although no one can use water without a permit from the State Engineer, permits and the water rights those permits recognize can be bought and sold. The State Engineer can issue compliance orders and can penalize people or entities for using more water than they are entitled to use or for illegally using water that they are not entitled to use. However, the State Engineer cannot usurp New Mexico state courts’ sole authority to adjudicate water rights. The Overview report provides in-depth information on the Water Code and prior appropriations. Here are some highlights:

- “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” (Overview, p.3).
- “Most areas of the State have declared underground water basins. In the remaining undeclared areas, however, the State Engineer has no jurisdiction over groundwater use. The underground basin within the Region was declared in 1956, or by extension thereafter” (Overview, p.3).
- “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” (Overview, p.3-4).
- “The State Engineer has power 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” (Overview, p.6).
- “The State Engineer may impose penalties for overdiversion or illegal diversion of water in an amount up to double the amount of the unauthorized diversion” (Overview, p.6).
- “Finally, the State Engineer is required to approve wells for domestic and livestock use” (Overview, p.3).

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- “Persons wanting to use water [cannot] act without a permit to make a new appropriation or to change an existing appropriation. Only the State Engineer [has] the authority to issue permits. The permit process requires the applicant to prove that a new use will not harm other users” (Overview, p.5).
- “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 fully appropriated, stream-connected groundwater appropriations or transfers will be conditioned to require retirement of surface water rights to offset any depletions caused by groundwater pumping” (Overview, p.7).
- “Water rights and permits to use water can be acquired in several ways: (1) by appropriating the right through 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; or change or supplement the point of diversion; or type of use” (Overview, p.10).
- “Since almost all surface waters in the State (and all of the major rivers, such as the Rio Grande and Pecos). are fully appropriated, surface waters today can only be acquired through transfer...” (Overview, p.10).
- “To transfer a water right, an applicant must show that the transfer (1) will not impair other water rights, (2) is not contrary to the conservation of water, and (3) is not detrimental to the public welfare” (Overview, p.11).
- “A water right priority date remains the same even though it is transferred” (Overview, p.12).
- “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. 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 than it was” (Overview, p. 12).

Loss of Water Rights

The doctrine of prior appropriation was designed to facilitate the use of water as a scarce resource. The system does not work efficiently unless it is possible for a person or entity to lose a right to water. The Overview report examines how water rights can be lost, namely 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 nonuse for one year after notice of proposed forfeiture is given by the State Engineer. 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. 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” (Overview, p.4).

In 1985, New Mexico adopted a 40-year Planning Statute to address the planning needs for cities and counties. This allows these public entities to acquire water rights and hold them for 40 years without risk of forfeiture (Overview, p. 30).

5.2.3 Federal Law

See Section 5.5.

5.2.4 Tribal Laws

Because of their unique political status in both New Mexico and the United States, New Mexico’s Pueblos have several different types of water rights, most of whose priority dates supercede the priority dates of all other water rights in the state. The Overview and Legal Issues reports explore these rights in-depth.

- “The United States recognizes and protects the right of the Pueblos to make their own laws and be governed by them. In order for Pueblos to maintain their essential right of self-government, courts recognize that the Pueblos’ water rights must remain independent of the State allocation rules and State administration of those rules. Ultimately, it is this regulatory power to the Pueblos what must be taken into consideration in regional water planning efforts” (Overview, p.32).
- “The six Pueblos which reside on the main stem of the Rio Grande within the boundaries of the Middle Rio Grande Conservancy District (MRGCD), as well as the MRGCD, are entities which in the future, after their rights are developed and quantified, could potentially supply water to other users within the Region” (Legal Issues, p.1).
- “The United States recognizes water rights for at least 20,242.05 acres of irrigation for the six Pueblos, with at least 8847 of those acres having recognized ‘prior and paramount’ priority” (Legal Issues, p.1).
- “Pueblo water rights are rooted in each Pueblo’s aboriginal sovereignty, and are federally protected. Congress also stated that Pueblo water rights for irrigation, livestock, and domestic uses are not subject to loss by forfeiture or abandonment” (Legal Issues, p.1-2).
- “The leading case determining the nature and extent of Pueblo Indian Water Rights...allow(s) the Pueblos to determine the purpose and place of use, without following state procedures, at least on Pueblo lands” (Legal Issues, p.2).
- “The senior priority for the six Pueblos’ water rights makes them particularly attractive for developers that need maximum reliability for their water supply” (Legal Issues, p.2).

Pueblo Aboriginal Rights

- “Pueblos have aboriginal rights to water that arise from the Pueblos’ aboriginal existence as autonomous societies and the use of their lands and waters...When the United States entered into the Treaty of Guadalupe-Hidalgo, the nation accepted the obligation to recognize and respect the aboriginal rights of tribes in areas acquired from Mexico” (Overview, p.33).

Federal law explicitly preserved the Pueblos’ rights to include at least irrigation uses, in-stream or non-diversionary uses, stock watering, and municipal and domestic uses (Overview, p.33).

Historically Irrigated Acreage

- Pueblos have “a prior right to all water necessary to irrigate their farmlands. ...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” (Overview, p.33).
- “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” (Overview, p.33).
- “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” (Overview, p.34).

Non-ditch or “Ak-chin” Water Rights

- “In 1997, the Aamodt court determined that even non-diversionary aboriginal use, if capable of being proved, could be the basis for a first priority right” (Overview, p.34).

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Stock Watering

- Courts have not resolved “the exact quantity of water available to the Pueblos for this purpose. Congress recognized a ‘prior right’ for ‘Pueblo Indians for domestic, stockwater, and irrigation purposes for the lands remaining in Indian ownership’” (Overview, p.34).

Domestic Use

- In *State of New Mexico v. Aamodt* (1976), the court determined that under Spanish and Mexican law “The Pueblo(s)...are entitled to a first right of primacia, to enough water ‘for their needs,’ or irrigation of their lands” (Overview, p.35).
- The United States Federal Court for the District of New Mexico recently determined “that the expansive right under Spanish and Mexican law was cut off by the Pueblo Lands Act of 1924. 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. 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, but must be sufficient to ensure that the Pueblos’ communities can be maintained” (Overview, p.35). In other words, Pueblos’ rights to use water for domestic purposes are not unlimited but still extensive.

Pueblo Federally Reserved Water Rights

- “The Pueblos also have federally 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’ of the lands reserved for the Pueblo, or some other appropriate measure depending on the purposes of the creation of the reservation” (Overview, p.36).

State Law Based Rights

- “The Pueblos may have State law based rights where they privately acquire lands with appurtenant pre-existing State law water rights” (Overview, p.36).

5.3 Conflicts among Current Laws and Regulations

The analysis contractor did not address conflicts among current laws and regulations. Accordingly, the topic has been deferred until the update cycles of this regional water plan

5.4 Federal Legal Issues

5.4.1 Federal Environmental Law Issues

The Overview report addresses several federal bodies of law that either control the ways in which people and the government interact with nature or outline the precautions government agencies must take so as not to harm the environment. Each of the following federal legal issues pertains to water planning in the Middle Rio Grande Planning Region.

Federal Reserved Water Rights

- If the United States government sets aside land for a specific purpose, but fails to explicitly set aside water rights, as well, courts may later imply a federal reservation of water. The amount of water implied is usually the amount that the government needs to fulfill the purposes of the original reservation of land. “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” (Overview, p.37).

- “In *United States v. New Mexico*, 438 U.S. 696, 700 (1978), 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” (Overview, p.37).

Endangered Species Act

The Endangered Species Act (ESA) was designed to protect threatened and endangered species and their habitat. The ESA works by controlling what the government, corporations, and individuals can do when their actions would further imperil an at-risk species. Both the Overview and the Legal Issues reports cover ESA concerns. For the Middle Rio Grand region, the Southwestern willow flycatcher and the Rio Grande silvery minnow can affect water planning. “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” (Overview, p.38).

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires government agencies to look before they leap, or to analyze the impact their actions will have on the environment before taking those actions. However, NEPA itself does not limit agency actions. Both reference reports cover NEPA.

- “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.’ One example of a ‘major federal action’ in the planning region is the planned diversion project of San Juan-Chama water proposed by the City of Albuquerque” (Overview, p.39).

Other Federal Laws

Several other federal laws can affect water planning and these are covered in Section 5.5.

5.4.2 Treaties

The Overview report briefly discusses two of the United States’ treaty obligations that affect water planning in the region. Below are excerpts from the Overview report on these treaties:

- “When the United States entered into the Treaty of Guadalupe-Hidalgo, the nation accepted the obligation to recognize and respect the aboriginal rights of tribes in areas acquired from Mexico” (Overview, p.33).
- In the Treaty with Mexico on Distribution of Waters of the Rio Grande Irrigation (1906), “the United States promised to deliver 60,000 acre-feet of water annually from the Rio Grande to Mexico at the head of the Mexican Canal near El Paso except in case of extraordinary drought.” (Overview, p.45).

5.4.3 Compacts

New Mexico has entered into water compacts, or binding agreements, with neighboring states. These compacts control the ways in which New Mexico can use water from the Rio Grande and other rivers. Specifically, the compacts detail the amount of river water that New Mexico is entitled to and the amount that New Mexico must pass along to other states. The Overview report provides a detailed discussion of compacts.

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Interstate Compacts, Generally

- “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 planning region, 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 constraints on the water supply available for use” (Overview, p.44).

The Rio Grande Compact

The Rio Grande Compact, an agreement among New Mexico, Colorado and Texas, dictates water distribution from the Rio Grande. Following is historical background and information about the Compact extracted from the Overview report.

- “Between 1870 and 1890, Coloradoans constructed 1,200 miles of canals and increased their irrigated acreage from 50,000 acres to 300,000 acres. By 1896, the irrigated lands in the San Luis Valley in Colorado were using all available natural flows to the river. These depletions in Colorado resulted in severe water shortages downstream in Texas and New Mexico (and Mexico)...” (Overview, p.45).
- “To resolve these problems, New Mexico, Colorado, and Texas formed a commission in 1923 to study the water supply and to draft a compact for the equitable apportionment of water between the three states. This initiative resulted in the Rio Grande Compact of 1929 and the subsequent Rio Grande Compact of 1938, which remains in effect today” (Overview, p.46).
- “The Rio Grande Compact of 1929 was essentially a compact to agree to a compact...Based on the [subsequent] negotiations of the statutory signatory states through their apportioned commissioners and the report of the Natural Resources Committee, the signatory states reached agreement on each state’s delivery obligations and a methodology to accomplish deliveries. The states formalized this agreement in the Rio Grande Compact of 1938” (Overview, p.46).
- “The Rio Grande Compact provides for a Commission to administer the Compact. The Colorado State Engineer and the New Mexico State Engineer serve as Commissioners for their respective states. The governor of Texas appoints the Texas Commissioner. The President of the United States appoints a representative to act as the non-voting chairman of the Commission... The Commission, by unanimous action, can order the release of water held in storage by reason of accrued debit by Colorado and New Mexico” (Overview, p.46).
- “The Rio Grande Compact of 1938 allows upstream storage of water in New Mexico, although with restrictions” (Overview, p.48).
- “...Article VI of the Compact provides that New Mexico’s ‘accrued debit shall not exceed 200,000 acre-feet at any time except as such debit may be caused by holdover storage of water in reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and San Marcial’... Article VI of the Compact further requires New Mexico to retain water in storage at all times to the extent of its accrued debit” (Overview, p.48).
- “In its simplest terms, New Mexico may store water in upstream reservoirs to the extent of its accrued debits, provided that storage in Elephant Butte Reservoir is not less [than] 400,000 acre-feet, and provided that New Mexico maintains water in storage to the extent of its accrued debit. Either the Commission at any time by unanimous vote, or the Texas Commissioner in January of each year, may call for a release of stored water to the limits of the accrued debit. New Mexico water users may avoid fulfilling this call from post-1929 reservoirs by substituting San Juan-Chama water” (Overview, p.50).

Colorado and Upper Colorado River basin Compacts

The Colorado and Upper Colorado River Basin compacts govern the consumptive use of the Colorado River. The San Juan-Chama Project was authorized under the Upper Colorado River Basin Compact in 1963. The San Juan-Chama Project was also authorized with the Navajo Indian Irrigation project. The use of the San Juan-Chama Project water is therefore governed by these compacts and not the Rio Grande Compact. Under Article III of the Upper Colorado River Basin Compact, only those states that are a party to the compact can utilize the Colorado River water.

Compact Challenges

- “While compacts are generally the favored mechanism for resolving disputes between states over interstate streams, they certainly do not end the interstate controversy over water. ...Meeting compact obligations can be challenging because the water supply in western stream systems is extremely difficult to predict or estimate, and such estimates are often inaccurate or subject to changing conditions” (Overview, p,50).

5.4.4 Federal Water Projects

The western US has been able to grow largely due to numerous federal water projects. In the Middle Rio Grande Region the San Juan-Chama Project is one of the most important federally sponsored projects.

- “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”....(Overview p 41).
- “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” (Overview, p.41).
- “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” (Overview, p.41).
- “...San Juan-Chama water is exempt from Rio Grande Compact water delivery accounting...” (Overview, p.41).

Other projects have included Cochiti and Jemez Dams and Elephant Butte Reservoir. Congress authorized Cochiti Dam in 1960 for flood and sediment control. The U.S. Army Corps of Engineers operates it. Cochiti’s operating rules provide that the dam be managed to bypass the maximum possible rate of flow that can be carried in the channel through the middle valley without causing flooding. Water is retained in the reservoir when flow exceeds the capacity of the downstream channel. Cochiti Dam is one of the largest earth-fill dams in the United States, with a capacity of 580,000 acre-feet.

The purpose of the Jemez Canyon Dam is flood and sediment control. The U.S. Army Corps of Engineers operates the dam. The Jemez Canyon Dam frequently stores spring and early summer runoff. The dam is operated to release stored water as quickly as possible without causing flooding. It has a capacity of about 103,000 acre-feet of water.

Elephant Butte Dam is the main component of the Rio Grande Project of the U.S. Bureau of Reclamation. The dam was completed in 1916. It has a capacity of over 2 million acre-feet. The current drought in the upper Rio Grande Basin has severely affected the water supply of the Rio Grande Project at Elephant Butte and Caballo Reservoirs. The March 1, 2003 storage level at Elephant Butte Reservoir was 405,075 acre-feet, only 20% of capacity, and the lake level was 75 feet below Elephant Butte Dam’s spillway crest. Elephant Butte Reservoir has not been this low since May 1979. Caballo Reservoir’s storage level in March 2003 was at 52,207 acre-feet, only 23% of capacity.

In six of the last seven years (1996-2002), Rio Grande spring runoff from snowmelt has resulted in below normal runoff volumes into Elephant Butte Reservoir. The runoff from 2002 was the eighth lowest on

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record in 107 years of flow data, dating back to 1895. Consequently, the storage level at Elephant Butte Reservoir has dropped dramatically.

5.5 Water Quality Standards

The Overview and Legal Issues reports address the issue of water quality standards extensively. The excerpts below are taken from the two reports.

5.5.1 Federal Standards

- "...most water quality laws have their genesis in federal law. 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" (Overview, p.51).

The Clean Water Act

The Clean Water Act (CWA) empowers the federal, state, and tribal governments to set water quality standards and regulate water pollution.

- "The Act's objective is to 'restore and maintain the chemical, physical and biological integrity' of the waters in the United States. The CWA has several ways 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. ...The TMDL process can be best described as determining and planning a watershed or basin-wide budget for pollutant influx to a watercourse" (Overview, p.51).
- "By enacting the CWA, Congress gave the U.S. Environmental Protection Agency (EPA) broad authority to deal with water pollution" (Overview, p.52).
- "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" (Overview, p.53).
- "Under the CWA, states are required to adopt water quality standards that protect certain designated uses for each river, stream segment, and lake" (Overview, p.53).
- "A State has an affirmative duty to revise standards in consideration of the use of the water and the water quality criteria applicable to those designated uses. The standards must also consider the value for public water supplies" (Legal Issues, p.29).
- "New Mexico has adopted water quality standards, which were last revised in October, 2002. The specific standards applicable to particular designated uses are set out in the Administrative Code. The Middle Rio Grande segments are currently designated for irrigation, limited warmwater fishery, livestock watering, wildlife, and secondary contact. The standards set out for those uses include pH, fecal coliform bacteria, Total Dissolved Solids (TDS), sulfates, and chlorides. The general standards for irrigation include a selenium limit, and those for livestock watering add radium, tritium and gross alpha criteria. General requirements for limited warmwater fisheries include limits for dissolved oxygen and ammonia" (Legal Issues, p.29-30).
- "Several Pueblos within the Region have water quality standards for all surface waters within the exterior boundaries of each Pueblo. The Pueblos of Isleta and Sandia have each adopted standards similar in form and substance to the State standards" (Overview, p.54).

The Safe Drinking Water Act

- "The Safe Drinking Water Act (SDWA) protects the quality of drinking water in the United States. The 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 and operators of public water systems to comply with the standards. New Mexico has promulgated drinking water regulations which adopt, in part, federal drinking water standards” (Overview, p.54).

- “The Safe Drinking Water Act Amendments (SDWAA) of 1996 mandated that the U.S. Environmental Protection Agency (EPA) evaluate and promulgate a new National Primary Drinking Water Regulation (NPDWR), including a Maximum Contaminant Level (MCL), for arsenic no later than January 1, 2001. After much controversy, the new MCL was lowered from 50 micrograms per liter (mg/L) or 50 parts per billion (ppb) to 10 ppb. The new NPDWR was effective on February 22, 2002, and full compliance must be achieved by January 23, 2006. Extensions are possible under specific circumstances. However, certain compliance activities must occur prior to the issuance of interim or extended deadlines” (Legal Issues, p.18).
- “In the Middle Rio Grande Basin several communities experience elevated levels [or arsenic] in ground water wells because of [the] geologic history” (Overview, p.20).
- “All community water systems, including those managed by Tribal or private organizations, are subject to the new arsenic standard and the general provisions of the Safe Drinking Water Act” (Legal Issues p.19).
- “Immediate compliance activities include sampling, monitoring, and reporting arsenic concentrations in water supply sources. All surface water supply systems must complete requisite monitoring activities by December 31, 2006 and all ground water dependent systems must complete sampling actions by December 31, 2007. However, all systems must conform to the new consumer confidence reporting requirements that became effective on February 22, 2002, and this activity may force an earlier compliance date for sampling and monitoring activities” (Legal Issues, p.20).

The Resource Conservation and Recovery Act

- “The Resource Conservation and Recovery Act (RCRA) 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 the EPA” (Overview, p.54).

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 of the environment. CERCLA establishes prohibitions and requirements concerning closed and abandoned hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified” (Overview, p.55).

National Pollution Discharge Elimination System

The Point Source Regulation Section’s goal is to protect surface water quality by assuring all point source discharges within the state comply with applicable requirements set forth in state and federal regulations. In order to insure compliance, the state must conduct compliance inspections, provide information to the regulated community and the public, and review federally issued National Pollution Discharge Elimination System (NPDES) permits. This process is designed to assure that the intended discharges are compatible with applicable state law, state water quality standards and the State’s Water Quality Management Plan.

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As a result of the 1987 amendments to section 402(p) of the federal Clean Water Act, the EPA recently promulgated regulations under Phase II of the National Pollutant Discharge Elimination System (NPDES) storm water-permitting program. These regulations significantly impact small (located in municipalities <100,000 population) Municipal Separate Storm Sewer Systems (MS4s) and small (<1 acre) construction sites.

In New Mexico operators of small MS4s located in urbanized areas (UAs) must develop, implement, and enforce a storm water management program to reduce the discharge of pollutants from its MS4 to the "maximum extent practicable" (MEP) and protect water quality. This currently includes Bernalillo County, Corrales village, Doña Ana County, Las Cruces city, Los Ranchos de Albuquerque village, Mesilla town, Rio Rancho city, Sandoval County, Santa Fe city, Santa Fe County, and Sunland Park city. It also includes public entities such as military bases, and federal and state facilities located in UA's that operate storm sewer systems.

5.5.2 State Standards

The state of New Mexico has its own water quality standards and regulations relating to groundwater pollution and storage. The Overview and Legal Issues reports briefly address this topic.

Groundwater Standards and Regulations

- “(G)roundwater 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. 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” (Overview, p.55).
- “New Mexico’s Environmental Improvement Board is charged with writing regulations for liquid waste disposal, and has promulgated regulations applicable to domestic septic systems” (Overview, p.56).

Groundwater Storage

- “The Ground Water Storage and Recovery Act (Act) provides the legal mechanism for aquifer storage and recovery” (Legal Issues, p.31).

“Water can be stored pursuant to the Act only by permit issued by the State Engineer, and a number of criteria must be met before a permit will issue. Water stored pursuant to the Act is exempt for forfeiture by the State for non-use. The State Engineer has adopted Underground Storage and Recovery regulations which govern the application process, the hydrologic, technical and financial capability report requirements, and permit terms and conditions. Aquifer storage of treated water must also comply with all requirements of New Mexico’s Underground Injection Control (UIC) Program, as implemented through the Water Quality Act, and the UIC regulations. It is assumed that any water injected into aquifers in the Region will be treated to drinking water standards” (Legal Issues, p.32).

5.5.3 Local Standards

“In the Region, a number of water quality issues could impact water availability. First, implementation of the arsenic standard will entail the use of water for treatment. The change in designation on the Rio Grande to ‘primary drinking water’ due to the San Juan/Chama diversion project could potentially impact the amount of water available as the drinking water supply to Albuquerque. Finally, the use of aquifer storage and recovery depends upon quality of water available for storage” (Legal Issues, p.18).

5.6 Relevant Lawsuits

5.6.1 Existing Court Decrees/Precedents Cited

The Overview and Legal Issues reports contain information on court cases that affect water planning in the Region. The two most important cases are presented below.

New Mexico v. Aamodt

- “The Aamodt court 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” (Overview, p.33).

Silvery Minnow

- “In 1994, the FWS [US Fish and Wildlife Service] ‘listed’ the Rio Grande silvery minnow (Minnow) as an endangered species under the ESA. In 1996, thousands of Minnows were killed when the river dried south of San Acacia Diversion Dam. According to the United States Bureau of Reclamation (Bureau) by 1999 over 95 percent of the remaining wild Minnow population was concentrated in the 60-mile reach between San Acacia Diversion Dam and Elephant Butte reservoir” (Legal Issues, p.15).
- “Since 1999, several lawsuits have been filed regarding the requirements of federal agencies under the ESA to protect the Minnow” (Legal Issues, p.15).
- The most recent court decision ordered the US Bureau of Reclamation to “meet specified [water] flow requirements” to keep the Minnow alive. However, the issue must ultimately be resolved by the 10th Circuit Court of Appeals, or perhaps the United States Supreme Court (Legal Issues, p.18). As of spring 2004, more recent court decisions and congressional action changed the status of San Juan Chama project water making it unavailable for ESA requirements.
- “The Supreme Court has emphasized that the language of the ESA ‘admits of no exception’ to the requirement to give the endangered species the highest priority. See TVA v. Hill, 437 U.S. 153, 173 (1978). The ESA requires federal agencies ‘to afford first priority to the declared national policy of saving endangered species’ and ‘to halt and reverse the trend towards species extinction, whatever the cost.’ id at 184,185 (emphasis added). In enacting the ESA, Congress required the federal courts to give greater protection to endangered species over human interests. Also, Congress did not allow federal courts to apply the ESA differently in different regions of the nation. Congress’ mandate, expressed in the ESA, to protect endangered species applies equally in wet and in desert regions of the United States” (Rio Grande Silvery Minnow v. Keys, 2002; *See also* Endangered Species Act).
- More extensive listing of lawsuits (Pueblo quality standards, recent minnow case, predicted Texas, etc.) appears in the referenced reports.

San Juan-Chama Project

The City of Albuquerque now plans to divert its San Juan-Chama Project water, treat it, and distribute it to city homes and businesses. The city’s application to the State Engineer for a permit to divert the water has been protested by a coalition of activists, including the Assessment Payers Association of the Middle Rio Grande Conservancy District, Amigos Bravos, the New Mexico Public Interest Research Group, Rio Grande Restoration, the Sierra Club, and the Socorro Soil and Water Conservation District.

5.7 Water Rights Administration Policies Specific to the Region

5.7.1 Ground-Water Basin Criteria

In 1956 the State Engineer declared the Middle Rio Grande an administered basin. New Mexico had, by that time, incurred a debt of nearly 530,000 acre/feet of water to Texas, despite the Bureau of Reclamation's efforts to maximize water delivery to Elephant Butte. By declaring the Middle Rio Grande a declared basin, the State Engineer anticipated preserving the surface flows of the Rio Grande. In 2000, new guidelines for administering water rights in the Middle Rio Grande basin were issued. The Middle Rio Grande Administrative Area Guidelines for Review of Water Rights Applications close the populous areas through Sandoval, Bernalillo, Valencia, and part of Socorro counties to any new groundwater appropriations, with the exception of domestic wells. The guidelines state that in this area all new applications to appropriate ground water will be rejected. The closure helps to insure that surface flows to meet compact obligations are maintained and impairment to existing water rights holders is prevented. Permits for those who applied prior to the issuance of the guidelines will be conditioned upon the valid consumptive use surface water rights held by the applicant. The applicant must be able to demonstrate that they are able to offset the depleting effect that the proposed groundwater pumping will have on the Rio Grande flows.

The Middle Rio Grande Administrative Area Guidelines may be found at <http://www.seo.state.nm.us/doing-business/mrgbasin/crit9-13.pdf>.

The reference documents for this chapter also provide more information.

- “The [State Engineer’s] Middle Rio Grande Administrative Area Guidelines contain an offset requirement. The Middle Rio Grande aquifer is hydrologically connected to the Rio Grande surface water system. Since groundwater diversions from aquifers hydrologically connected to the Rio Grande affect the fully appropriated surface flow, the State Engineer conjunctively manages the water resources within the Rio Grande Basin to protect existing water rights and to ensure New Mexico’s compliance with the Rio Grande Compact” (Overview, p.9).
- “The Middle Rio Grande Guidelines require that groundwater permittees obtain valid surface water rights in an amount sufficient to offset the effects of their groundwater diversions on the surface flow of the Rio Grande stream system. This requirement protects the surface flows of the Rio Grande from being depleted or reduced by groundwater diversions” (Overview, p.9).
- “The Middle Rio Grande Guidelines require that the appropriator obtain valid consumptive use surface water rights to offset the greater of either: a) total well diversions less any flow returned directly to the Rio Grande on a yearly basis; or b) the net surface water depletion associated with past and present use including consideration of residual effects of past diversion, on a time schedule approved by the State Engineer” (Overview, p.9).

5.8 Special Districts

5.8.1 The Middle Rio Grande Conservancy District

Established in the 1920s to address flooding, irrigation and drainage issues in the Middle Rio Grande valley, the Middle Rio Grande Conservancy District (MRGCD) possesses several kinds of water rights and a water storage right at El Vado Reservoir. The MRGCD also operates a Water Bank, which allows those in need of water to borrow or lease extra from those who have too much. The Overview report extensively discusses the MRGCD’s water rights and water bank.

MRGCD Water Rights

- “Formation of the MRGCD brought together 70 acéquias into one unified entity designed to make all lands in the middle valley irrigable” (Overview, p.26).

- “The MRGCD extends from Cochiti Dam south for approximately 150 miles to the Bosque del Apache Wildlife Refuge” (Overview, p.26).

Following are the seven kinds of water rights that MRGCD holds:

- “The first type of water right within the district is the individual pre-1907 diversionary water right. ...These pre-1907 water rights are outside the jurisdiction of the State Engineer and are vested in the individual water holders who reside within the MRGCD” (Overview, p.26).
- “Second, a very small number of individuals within the MRGCD may hold permits from the State Engineer for water rights established before the creation of the District (1925) but after 1907” (Overview, p.27).
- “The third type of water right is the MRGCD’s permitted surface water right. ...the MRGCD has obtained water rights under two permits filed with the State Engineer. These additional water rights under permit Nos. 1690 and 0620 represent 42,482 acres of reclaimed lands developed by the works of the MRGCD” (Overview, p.27).
- “The fourth type of water right is the Pueblo Water right. The six Pueblos within the MRGCD have ‘prior and paramount rights,’ which are based on their aboriginal sovereignty, totaling 8,847 acres of Indian land...Pueblo water rights are senior to all other rights within the MRGCD and irrigate approximately 8,847 acres of Indian land” (Overview, p.27).
- “The fifth type of water right with the MRGCD are pre-1956 and permitted groundwater rights. Individuals and the MRGCD own water rights based on wells drilled prior to 1956, when New Mexico’s State Engineer asserted jurisdiction over the underground waters of the Rio Grande Basin” (Overview, p.27).
- “The sixth type of water right in the MRGCD is San Juan-Chama water. In 1963, the MRGCD contracted with the Bureau of Reclamation for 20,900 acre-feet of water per annum from the San Juan-Chama Project” (Overview, p.27).
- “Finally, the MRGCD has water storage rights of 198,110 acre-feet at El Vado reservoir pursuant to State Engineer Permit No. 1690. Although the storage right is for reservoir space and not a water right per se, it is a valuable water asset held by the MRGCD” (Overview, p.27).

MRGCD Water Bank

MRGCD established a Water Bank in 1995 to provide “a water management system and a method by which the MRGCD manages the distribution of water within its boundaries by moving water from areas where it is not being used to areas of need” (Overview, p. 27). “To date, water loaned from the bank has been used to irrigate lands that do not have their own water rights. In the future water from the bank may be available for non-agricultural uses from new points of diversion and may be available outside the boundaries of the district” (Overview, p.29). However, as of spring 2004 the OSE has taken the position that the Conservancy Act does not allow reallocation of use outside of MRGCD boundaries. In addition the OSE has further taken the position that the quantity of rights vested within the MRGCD water bank cannot be quantified until the total beneficial use of MRGCD is established.

5.9 Legal Issues Needing Resolution

One of the main purposes of this chapter is to provide a legal context for the plan and to indicate which water issues need to be resolved. The following issues, addressed by the Overview and Legal Issues reports, are among those requiring attention.

5.9.1 Pueblo Water Rights

- “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

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non-Indian communities, it is impossible for regional planning to be anything but a wish list” (Overview, p.32).

- “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 outside tribal lands, where the diversion affects resources on tribal lands. Thus, 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” (Overview, p.32). In other words, in a time of declining water supply and increased demand, senior Pueblo water rights could trump rights developed subsequently.

Stock Watering

- Courts have not yet determined how much water Pueblos are entitled to use for stock watering, although Congress has recognized Pueblos’ stock watering rights as a “prior right” Resolution of this issue would facilitate water planning in the Region (Overview, p.34).

Domestic (Municipal) Use

- The United States Federal Court for the District of New Mexico recently determined “that the expansive (domestic use) right under Spanish and Mexican law was cut off by the Pueblo Lands Act of 1924. 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. 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, but must be sufficient to ensure that the Pueblos’ communities can be maintained” (Overview, p.35). This unknown must be factored into the water plan.

Rio Grande Compact

- “The Compact 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 six Pueblos are located on the main stem of the Rio Grande in the Region, interpretation of this article is important in the water planning process” (Overview, p.51).

5.9.2 San Juan-Chama Project

- “Both Albuquerque and Santa Fe have plans to construct river diversion and treatment systems so that they can use their San Juan-Chama water directly as part of their public water supply. Española is also considering a river diversion for its San Juan-Chama water. 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 into these reviews” and into regional water planning (Overview, p.42).

5.9.3 Development and the Domestic Water Loophole

- “The availability of an adequate water supply is increasingly a limiting factor on 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” (Overview, p.42).
- “Because obtaining a domestic water right permit is essentially a ministerial process, it is view by many as both a loophole in the regulation of groundwater withdrawals and as an obstacle to the

use of water supply as a growth management tool” (Overview, p.42). A water plan must deal with this loophole.

5.9.4 Adjudication and Domestic Well Permits

Adjudication is the judicial determination of existing rights to place the water of a particular hydrologic unit to a beneficial use. This requires the joining of all water users who divert water from the same hydrologic unit. In order to initiate an adjudication, state law mandates that the State Engineer perform hydrographic surveys and investigations of each stream system and source of water, beginning with those used primarily for irrigation (See NMSA § 72-4-13). Upon completion of the survey the State Engineer institutes an adjudication to obtain a judicial determination and definition of water rights within each stream system and underground basin as required by law (See NMSA § 72-4-15). The legal bases of each water right within a basin must be identified and surveyed, described in a written offer, and conveyed to the water rights owner who may accept or reject the offer. If rejected, it may then be litigated between the state and the claimant through evidentiary hearings before the adjudication judge. After individual water rights claims have been adjudicated between the state and the individual claimants, a defendant may challenge the water rights of others during the *inter se* phase of the adjudication. After challenges are heard, the Court issues a final decree that defines the rights of each and every claimant on the stream system.

Adjudications are currently underway in both federal and state court in New Mexico. State Attorneys General, through the State Engineer, have the responsibility for conducting adjudications on behalf of the state of New Mexico. The entire Pecos stream system is currently being adjudicated. The Pecos adjudication was filed in 1956. Adjudications of several tributaries to the Upper Rio Grande were started between 1966 and 1983 and involve the rights of 13 New Mexico Indian Pueblos and the Jicarilla Apache Tribe, the federal government, municipalities, community ditches and thousands of individual defendants.

The adjudication of the lower Rio Grande began in 1985 and involves an irrigation district, a major federal reclamation project, municipal and county water rights, a state university, the city of El Paso and thousands of individual groundwater claimants within Dona Ana County. The San Juan Adjudication is also in progress and involves the rights of the Navajo Nation and the Jicarilla Apache.

Outside of a declared basin, an appropriator of ground water is free under all circumstances to drill a well and acquire a water right without the permission of the State Engineer. The holder of an existing water right can sue a new ground water user, but as in the case of a pre-1907 surface water right, the burden is on the injured existing water right holder to prove the harm. Inside a declared basin, a potential new ground water appropriator has to apply for a permit from the Office of the State Engineer before drilling a well. He must give notice to others, prove that the new well will not be detrimental to existing wells, and that there is unappropriated water.

There is a small exception to the application process for a well inside a declared basin under NMSA § 72-12-24. This statute allows the owner of a water right to first apply and then to drill a supplemental well that draws its water from the same underground stream, channel, artesian basin, reservoir, or lake as the well being supplemented. The supplemental well must not increase the appropriation of water, it must be drilled in an emergency, and the state engineer must not find impairment on other users by the well.

5.9.5 Water Quality Standards

- “In light of the City of Albuquerque’s proposal to install a direct diversion in the river for its water supply, these designated uses will have to be reevaluated and potentially revised based upon a new use for domestic water supply. Such a review and/or revision also requires that the State adopt criteria for all toxic pollutants that might interfere with the designated uses. If the river segment is elevated to a drinking water designation, then further screening and monitoring for excessive pollution loads will be required. The domestic water supply standards add an evaluation for carcinogenic materials, a nitrate constituent, and lowered standards for two forms of radium, strontium and tritium. It would be anticipated that the New Mexico Environment Department would be required to take action under its Assessment Protocol to determine if the Middle Rio Grande segment water meets the heightened standards required of a domestic water supply” (Legal Issues, p.30).

5.9.6 Ownership of saved water

- In the legal feasibility fact sheets, the contractor identified in at least four alternatives (Watershed Plans, Bosque Management, Agricultural Metering and Agricultural Conveyance) where there is an issue of who owns the saved/salvaged water. With regard to watershed restoration and bosque management, under current state law the increased flows would be added to the general “public waters” and managed by the state (Daniel B Stephens and Associates undated).
- With regard to savings from agricultural metering and conveyance, the legal analysis states, “It is impossible at this time to determine the ownership of any saved water resulting from more efficient use of water within the MRGCD under this alternative. Once MRGCD’s license is issued, any water saved may ultimately be available to water users within the MRGCD, if such saved water falls within MRGCD’s licensed right to divert, use, and store water. . . . If any saved water does not fall within the parameters of MRGCD’s license, under the current state of the law, any saved water would return to the system as “public water” (Daniel B Stephens and Associates undated).

5.9.7 Potential Reallocations of Water

In an area with scarce water resources, continued development presents a challenge. If the region is going to continue developing and growing, where are we going to get all of the water that we need? The Overview and Legal Issues reports discuss several potential reallocations of water, some of which have been mentioned previously in this summary.

Pueblo Water Rights

- “The six Pueblos which reside on the main stem of the Rio Grande within the boundaries of the Middle Rio Grande Conservancy District (MRGCD), as well as the MRGCD, are entities which in the future, after their rights are developed and quantified, could potentially supply water to other users within the Region” (Legal Issues, p.1).
- “The leading case determining the nature and extent of Pueblo Indian Water Rights. . . allow[s] the Pueblos to determine the purpose and place of use, without following state procedures, at least on Pueblo lands” (Legal Issues, p.2).
- “The senior priority for the six Pueblos water rights make them particularly attractive for developers that need maximum reliability for their water supply” (Legal Issues, p.2).

Regional Water Bank

- “In the West, water banking is increasingly used for allocation of scarce water resources. Texas, Arizona, and Idaho, among others, all have state water banking statutes and operational water banks” (Legal Issues, p.3).
- “Currently, there is no specific water banking law that allows for the creation of a regional water bank. In the 2002 Legislative session, the Legislature enacted water banking legislation for the Lower Pecos River and may consider extending the authorization for water banking to the rest of the state during the 2003 legislative session” (Legal Issues, p.3).

MRGCD Water Bank

- “In the future water from the Bank may be available for non-agricultural uses from new points of diversion and may be available outside the boundaries of the MRGCD. Before that occurs, the MRGCD and the State Engineer will have to agree on a process for such reallocation. In addition, the total quantity of rights available to be loaned from the Bank will have to be quantified” (Legal Issues, p.7).

Reclaimed Water

- “‘Reclaimed’ water can arise in several circumstances. Water can be reclaimed both through return flows, and through water reuse methods” (Legal Issues, p.7).

Return Flows

- “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, injection, or more efficient water used methods is a return flow” (Legal Issues, p.7).
- “A return flow credit would allow the supplier to offset the effects of increased diversions for use elsewhere in its water system. Such offsets could allow additional pumping from municipal wells” (Legal Issues, p.7).

Water Reuse Programs

- “Water can be reclaimed through water reuse programs, in which household and industrial gray water and treated wastewater is reused, generally for irrigation. Although water reuse programs may provide additional sources of water, they raise public health and water quality issues that must be addressed. Further, a prevailing issue with water reuse systems is that if widely used, less water is returning to the stream system through return flows” (Legal Issues, p.9).
- There are two kinds of water reuse programs: greywater reuse and treated wastewater reuse. “Essentially, gray water is any water, other than toilet water, draining from a household.” On March 11, 2003, the Governor signed Chapter 7 into law (NMSA 74-6-2; NMSA 74-6-4L) “to allow for the limited use of gray water without a permit” (Legal Issues, p.10).
- “The reuse of treated [waste] water must be permitted by the State of New Mexico Environmental Department” (Legal Issues, p.11).
- “Water reuse programs allowing for the use of gray water and treated wastewater could increase available water supplies, particularly for irrigation. Reclaimed water can potentially increase the amount of water available for use within the Region” (Legal Issues, p.7).

5.10 Local Conflicts

The analysis contractor did not address local conflicts. Accordingly, the topic has been deferred until the update cycles of this plan.

5.11 External Conflicts

The analysis contractor did not address external conflicts. Accordingly, the topic has been deferred until the update cycles of this plan.

5.12 Inventory of Tools for Implementation

The following pages contain an inventory or shopping list of tools from which decision-making authorities, particularly local governments, can select. These have been drawn from a worldwide search of databases. In each case, a title, brief description, and a reference for meaningfully more detail is provided. The intent is to provide each local government with the tools that allow tailoring appropriate for its jurisdiction.

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Type of Ordinance	Major provisions	Reference
<p>Conservation Ordinance</p> <p>Residential construction and remodeling</p>	<p>All new and remodel residential construction and all replacements of plumbing fixtures in existing residential construction will employ certain conservation devices to minimize water consumption. Such devices may include bathroom and kitchen faucets that deliver a maximum of 2.5 gallons per minute (gpm), showerheads that deliver a maximum of 2.5 gallons per minute, toilets that use a maximum of 1.6 gallons per flush, and evaporative coolers and decorative water-using devices (such as waterfalls) are equipped with water saving devices.</p>	<p>Water Conservation Code for the City of Mesquite, Nevada</p> <p>http://www.mesquitenv.com/citycode/Title_7/1E/index.cfm</p> <p>City of Santa Monica Water Conservation Ordinances</p> <p>http://www.santa-monica.org/environment/policy/water/policies.htm</p>
<p>Conservation Ordinance</p> <p>Commercial construction and remodeling</p>	<p>All new and remodel commercial construction shall contain similar conservation features, including automatic shutoff of public bathroom faucets after a maximum of .25 gallons of water have flowed through the faucet; urinals may use a maximum of 1 gallon per flush; toilets or urinals containing timing devices to flush periodically regardless of use are prohibited. Evaporative cooling systems, and outdoor decorative fixtures such as fountains, must be equipped with an approved water recycling or reuse system.</p>	<p>Water Conservation Code for the City of Mesquite, Nevada</p> <p>http://www.mesquitenv.com/citycode/Title_7/1E/index.cfm</p>
<p>Conservation Ordinance</p> <p>Retrofit Upon Sale</p>	<p>In all residential and commercial properties which are sold or transferred, this ordinance requires installation of ultra-low flush toilets and urinals, low flow showerheads, and shut-off valves for reverse osmosis water filtration systems. A certificate of compliance is issued by the [City] and must be included in the escrow process before the transaction can be completed.</p>	<p>City of Santa Monica Water Conservation Ordinances</p> <p>http://www.santa-monica.org/environment/policy/water/policies.htm</p>
<p>Conservation Ordinance</p> <p>Residential Water Use</p>	<p>Lawns cannot be watered between the hours of 10AM and 4PM. Patios, driveways, and sidewalks cannot be hosed down, and at all times water is prohibited from running off lawns or landscapes into the streets, alleys, or gutters. All outdoor decorative fixtures must use a recycling system. Swimming pools shall not be filled or emptied unless it is a first filling of a new pool or it can be certified that necessary leak repair work is being performed; all water leaks from exterior or interior pipes, or</p>	<p>City of Santa Monica Water Conservation Ordinances</p> <p>http://www.santa-monica.org/environment/policy/water/policies.htm</p> <p>City of Gilbert Arizona</p> <p>http://www.ci.gilbert.az.us/water/default.html</p>

Type of Ordinance	Major provisions	Reference
	plumbing fixtures must be repaired immediately; no one shall waste water by allowing it to flow without reasonable use; no washing of vehicles of any kind except with a hand held bucket or hose equipped with a shut-off nozzle.	City of El Paso Water Utilities http://www.epwu.org/ordinance.html
Conservation Ordinance Rainwater Harvesting	Rainwater harvesting refers to the capture, diversion, and storage of rainwater for landscape irrigation and other uses, and can be an effective water conservation tool. A candidate ordinance may offer a monetary incentive to invest in a rainwater collection system. Such an incentive may be applicable to small-scale residential landscapes, and larger commercial and housing sites.	New Mexico Rainwater Harvesting http://www.seo.state.nm.us/water-info/conservation/rainwater.html
Conservation Ordinance Commercial Water Use	Lawns or landscapes cannot be watered between the hours of 10AM and 4PM. Parking lots, sidewalks, patios, driveways, or any other paved surface may not be hosed down at any time. At all times water is prohibited from running off lawns or landscapes into the streets, alleys, or gutters. All outdoor decorative fixtures must use a recycling system. Swimming pools shall not be filled or emptied unless it is a first filling of a new pool or it can be certified that necessary leak repair work is being performed; all water leaks from exterior or interior pipes, or plumbing fixtures must be repaired immediately; no one shall waste water by allowing it to flow without reasonable use	City of Santa Monica Water Conservation Ordinances http://www.santa-monica.org/environment/policy/water/policies.htm
Conservation Ordinance Landscaping regulations	The maximum area permitted for turf shall be twenty percent of the total area landscaped on the site Higher percentages may be permitted when turf is an essential part of the development such as playing fields for schools or parks, or as determined by the Architectural Review Board. Large areas of turf shall use soil moisture sensors as part of the irrigation system. Turf shall only be permitted in areas amenable to irrigation; turf on slopes or narrow pathways it prohibited. Low water-use turf must be used; other plants used in landscaping must be low water	City of Santa Monica Water Conservation Ordinances http://pen.ci.santa-monica.ca.us/municode/codemaster/Article_9/04/10.04.110.html

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Type of Ordinance	Major provisions	Reference
	use. Fountains shall be prohibited.	
Conservation Ordinance Collect landscaping data	This ordinance would promote the development of a landscape program to collect and maintain data related to landscape acreage and water use; promote water budget irrigation scheduling for landscapes; develop GIS products for the web to help promote landscape water use efficiency	California Dept. of Water Resources http://www.owue.water.ca.gov/landscape/index.cfm Marin County, CA Municipal Water District Landscape ordinance 385 http://www.marinwater.org/landscapeord385.html
Conservation Ordinance Golf course management	This ordinance would require an environmental analysis of the golf course area to determine the existing environmental conditions at the site. Golf course design and maintenance will then minimize negative impacts to existing habitats and maximize water savings.	Golf Course Management Guidelines form Baltimore County, MD http://www.epa.gov/owow/nps/ordinance/misc.htm
Conservation Ordinance Water and Wastewater Rate Structure	This ordinance implements a water and wastewater rate structure that encourages the efficient use of water by altering the level of fixed and variable charges.	City of Santa Monica Water Conservation Ordinances http://www.santa-monica.org/environment/policy/water/policies.htm
Enforcement Ordinance Prohibition on tampering with meters	This ordinance regulates illegal hose or water meter tie-ins, and imposes fines for illegally tampering with, or bypassing, water meters. The amendment places the burden of proof on the customer if the customer's meter has been tampered with. Violators can be fined \$250 on a first offense. The second offense carries a fine of \$500 and subsequent offenses a minimum fine of \$1,000.	City of Tucson Water Conservation Ordinances http://www.ci.tucson.az.us/water/conservation/ordinances/ordinances.htm
Ordinance to Assess a Mitigation Fee	A water-demand mitigation to pay for the cost of fully mitigating the water demand impacts of new development may be assessed.	City of Santa Monica Water Conservation Ordinances http://www.santa-monica.org/environment/policy/water/policies.htm
Wastewater Mitigation for Large Development Projects	Developers of very large projects may be required to install onsite wastewater treatment plants in an effort to reduce or eliminate additional flows generated by the development project to the sewer system. These requirements are negotiated with the developer on a site specific basis and are included in the	City of Santa Monica Water Conservation Ordinances http://www.santa-monica.org/environment/policy/water/policies.htm

Type of Ordinance	Major provisions	Reference
	development agreement for the project.	
Educational programs	Education about water conservation and water issues in the public school system: educating students about the environmental, economic and social issues related to sustainability, we increase the likelihood that they will make sustainable decisions in the future. Such a program would incorporate sustainability into the curriculum at local schools and involve the students in evaluating school operations and recommending sustainable alternative practices.	<p>City of Santa Monica http://www.santa-monica.org/environment/policy/education/</p> <p>Southern Nevada Water Authority http://www.snwa.com/html/index.html</p>
Drought Management Response procedure	The drought ordinance will precisely define the conditions that constitute drought, and declare various stages of drought. The appropriate local authorities will declare water use reduction stages, and the corresponding conservation actions to be taken within each successive stage.	<p>New Mexico http://weather.nmsu.edu/drought/droughtp.htm</p> <p>City of Phoenix http://phoenix.gov/WATER/drtatta.html</p> <p>City of Longmont, CO http://www.ci.longmont.co.us/water_waste/drought/index.htm</p> <p>Tucson, AZ http://www.ci.tucson.az.us/water/conservation/ http://www.ci.tucson.az.us/water/conservation/emergency_water_conservation_o/emergency_water_conservation_o.htm</p> <p>For links to other state's drought plans, see http://www.drought.unl.edu/plan/stateplans.htm</p>
Model Drought Ordinances (2)	Defines nonessential uses, levels of drought, and responses to the various phases of drought (restrictions within different water use sectors)	<p>South Carolina Drought Response Program http://www.dnr.state.sc.us/climate/sco/drought/drought_resp_ord.html</p> <p>http://www.ncwater.org/Water_Supply_Planning/Water_Conservation/example_or</p>

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Type of Ordinance	Major provisions	Reference
<p>Water Quality</p> <p>Wellhead Protection</p>	<p>Implement zoning ordinances to protect the wellhead protection area</p> <p>Develop a public education program to promote awareness of and cooperation with the wellhead protection program.</p>	<p>dinance.pdf</p> <p>http://www.nmenv.state.nm.us/dwb/whpp.html</p> <p>Santa Clara Valley Water District Well Ordinance 90-1</p> <p>http://www.valleywater.org/Water/Where_Your_Water_Comes_From/Local_Water/Wells/District_Well_Ordinance.shtm</p> <p>Massachusetts Wellhead Protection Program</p> <p>http://www.state.ma.us/dep/brp/dws/files/whpguide.pdf</p> <p>Model Ordinances for Source Water Protection – EPA Region 10</p> <p>http://yosemite.epa.gov/r10/water.nsf/bb9c63e62d1ae1f8882564f4007da918/3559706fabdbfe1d882565d80055aba9?OpenDocument</p>
<p>Water Quality</p> <p>Protection of Aquatic Buffers</p>	<p>Aquatic buffers are generally vegetated strips of land running parallel to a stream that serve as natural boundaries between local waterways and existing development. They help protect water quality by filtering pollutants, sediment, and nutrients from runoff. Buffers also provide flood control, stream bank stabilization, stream temperature control, and room for lateral movement of the stream channel. Buffers are also instrumental in maintaining the base flow in streams, and provides a source of food and energy to the aquatic ecosystem.</p> <p>An effective buffer ordinance must include clearly delineated buffer boundaries and must protect the vegetation and soil within the buffer from disturbance.</p>	<p>Baltimore County, MD</p> <p>Rhode Island Coastal Zone Program</p> <p>Ordinance on Riparian Habitat Areas, Napa, CA</p> <p>Portland Metro Floodplain Preservation Ordinance</p> <p>Model Land Trust Agreement (Natural Lands Trust)</p> <p>http://www.epa.gov/owow/nps/ordinance/buffers.htm</p> <p>Model Ordinance:</p> <p>http://www.stormwatercenter.net/Model%20Ordinances/buffer_model_ordinance.htm</p>
<p>Watershed Protection</p> <p>Erosion &</p>	<p>An Erosion and Sediment Control ordinance would require a developer to produce an Erosion and Sediment Plan to limit damage to water quality and negative impacts to aquatic habitat that</p>	<p>Erosion and Sediment Control Ordinance from Minneapolis, MN</p> <p>Clearing and Grading Ordinance from Olympia, WA</p>

Type of Ordinance	Major provisions	Reference
Sediment Control	may occur during the land clearing and disturbance associated with the construction process.	<p>Erosion and Sediment Control Inspection Checklist from the Lower Platte South Natural Resources District, NE</p> <p>Small site design guideline from the Indiana Department of Natural Resources</p> <p>Pre-Construction Meeting Notice from Montgomery County, MD</p> <p>http://www.epa.gov/owow/nps/ordinance/erosion.htm</p> <p>City of Waverly, MN</p> <p>http://www.ci.waverly.mn.us/legals/ord0101.html</p>
Water Quality Model Groundwater Protection Ordinance	The purpose of the ordinance is to protect and preserve public drinking water sources in order to safeguard the public health, safety and welfare of Salt Lake Valley residents and visitors. The ordinance establishes and designates drinking water source protection zones and groundwater recharge protection areas for all groundwater and spring sources of public drinking water within the Salt Lake Valley.	<p>Salt Lake Valley Model Groundwater Protection Ordinance</p> <p>http://www.utah-water.org/ModelOrdinance.htm</p>
Water Quality Illicit Discharges	Illicit discharge detection and elimination programs are designed to prevent contamination of ground and surface water supplies by monitoring, inspection and removal of illegal non-stormwater discharges. An essential element of these programs is an ordinance granting the authority to inspect properties suspected of releasing contaminated discharges into storm drain systems. Another important factor is the establishment of enforcement actions for those properties found to be in noncompliance or that refuse to allow access to their facilities.	<p>Fort Worth, Texas Environmental Code-Stormwater Protection</p> <p>Washtenaw County, Michigan Regulation for Inspection of Residential Onsite Disposal Systems at Property Transfer</p> <p>Metropolitan St. Louis Sewer District Sewer Use</p> <p>City of Monterey, California Stormwater Ordinance</p> <p>Montgomery County, Maryland Illicit Discharge Ordinance</p> <p>http://www.epa.gov/owow/nps/ordinance/discharges.htm</p> <p>http://www.drcog.org/reg_growth/water/storm%20water/StormWater_ordinance.htm</p>
Water Quality	The main goal of the post-construction stormwater management ordinance for	Maryland Department of the Environment Proposed Stormwater Management

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Type of Ordinance	Major provisions	Reference
<p>Quality</p> <p>Stormwater runoff: Post Construction Controls</p>	<p>existing development is to limit surface runoff volumes and reduce water runoff pollution loadings. There are other ideas that can be included in an ordinance to improve its ability to control stormwater runoff. The ordinance could include what nonstructural and structural stormwater practices are allowed within the community. Communities may also wish to add language regarding on-site stormwater requirements and whether off-site treatment is an option.</p>	<p>Regulations</p> <p>Grand Traverse County, Michigan Soil Erosion and Stormwater Runoff Control Ordinance</p> <p>City of Seattle Stormwater, Grading and Drainage Control Code</p> <p>St. Johns River Water Management District, Florida—Environmental Resource Permits:</p> <p>City of Santa Monica, California Municipal Code of Ordinances—Urban Runoff Pollution</p> <p>http://www.epa.gov/owow/nps/ordinance/postcons.htm</p>
<p>Water Quality</p> <p>Stormwater Control Operation & Maintenance</p>	<p>A stormwater ordinance focuses primarily on the maintenance of stormwater BMPs, and includes the elements of design, routine maintenance, and inspections. Stormwater ordinance language regarding the maintenance of erosion control measures would differ slightly from a sediment and erosion control ordinance due to the short-term nature of these measures. In addition, it is important to note that elements such as the process of applying for a permit would be included in more comprehensive sediment and erosion control or stormwater ordinances. Areas where additional information might be useful are indicated with the following symbol:</p>	<p>Ordinance Language from Grand Traverse County, MI</p> <p>Example maintenance agreement from Albemarle County, VA</p> <p>Easement and ROW agreement from Montgomery County, MD</p> <p>Anne Arundel County, MD Inspection Checklist</p> <p>Performance Bond from Colorado</p> <p>http://www.epa.gov/owow/nps/ordinance/stormwater.htm</p> <p>http://www.drcog.org/reg_growth/water/sorm%20water/StormWater_ordinance.htm</p>
<p>Water Quality</p> <p>Nonpoint source pollution</p>	<p>An ordinance to control nonpoint source pollution would introduce Best Management Practices (BMP's), such as the management of storm water runoff, to minimize nonpoint source pollution.</p>	<p>Lake Travis Nonpoint Source Ordinance</p> <p>http://www.epa.gov/owow/nps/ordinance/misc.htm</p> <p>North Carolina Department of Environment and Natural Resources</p> <p>http://h2o.enr.state.nc.us/su/PDF_Files/SW_Documents/BMP_Manual.PDF</p>
<p>Watershed protection ordinance</p>	<p>A watershed protection ordinance would define areas within the watershed based on the level of protections required.</p>	<p>Model Watershed Protection Ordinance (North Carolina)</p> <p>http://h2o.ehnr.state.nc.us/wswp/forms/m</p>

Type of Ordinance	Major provisions	Reference
	<p>Watershed administrator reviews subdivision applications for impacts to water quality, watershed buffer areas, and the effect on erosion and sedimentation. This ordinance would also require the creation of a watershed review board.</p>	<p>odelord500.pdf http://h2o.ehnr.state.nc.us/wswp/factform.html</p>
<p>Wetland Preservation Ordinance</p>	<p>Preserve wetlands, and protect the wetlands of the (Township/Municipality) from sedimentation, destruction, and misuse. The protection, preservation, replacement, proper maintenance, restoration, and use in accordance with the character, adaptability, and stability of the (Township/Municipality)'s wetlands, in order to prevent their pollution or contamination; minimize their disturbance and disturbance to the natural habitat therein; and prevent damage from erosion, siltation, and flooding.</p>	<p>Model Wetland Ordinance http://www.crowc.org/projects/scwetlands/modelwetlandord.html A Model Wetlands Ordinance for Indiana Communities http://home.switchboard.com/indianawetlands</p>

Chapter 5 References

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