

Michael C. Meyer

Water in the Hispanic Southwest

A Social and Legal History, 1550–1850

With a New Afterword by the Author

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About the Author

Michael C. Meyer's interest in Mexican and Latin American history took the form of writing, editing, teaching, and research. He was director of the Latin American Area Center at the University of Arizona, he wrote and edited numerous books on the history of Mexico and Latin America, including *The Course of Mexican History*, coauthored with William L. Sherman and Susan M. Deeds. In 1980 Dr. Meyer became a director of PROMEX, the Consortium of United States Research Programs for Mexico. His interest in water law in the history of the Southwest stemmed from his involvement as an expert witness in the longwinding water rights case of the *State of New Mexico vs. R. Lee Aamodt*. Dr. Meyer was editor of the *Hispanic American Historical Review*, senior editor of *The Americas*, and a member of the board of advisers of the *Arizona Journal of International and Comparative Law*. He died in 2007.

To Goldale, Scott, Debra, and Sharon

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Preface

For thousands of years the philosophies, religions, and mythologies of mankind have concerned themselves with water—with its regenerative qualities and its destructive potential. From stories of the Creation and the Flood, permeating a score of cultures, to philosophical musings spanning centuries, water has played a pivotal role in determining how man views himself and his fellow man, and how he tries to cope with his physical and spiritual environment.

In the ancient world, water was one of those few determinants of life that actually defined the most fundamental kind of social doctrine. As water was subjected to some measure of human control and the first victories over aridity were scored, agriculture became a mainstay of human existence and man moved tentously along the road to civilization. It was no accident that the first civilized communities developed in the Tigris and Euphrates river valleys, where irrigation provided for a food surplus and ultimately made urban life possible.

Water helped ancient man learn those first difficult lessons about the rights of others and responsibility to a larger society. Even the most rudimentary irrigation system required organization, discipline, cooperation, and a measure of social cohesion. Mutual need begets mutual aid. Notions of sharing, of equity, of compromise, and of the common good first floated precariously on this liquid foundation to be later cemented in philosophical thought and codified law. Philosophically, judicially, and even ecologically man began to cope with the timeless quandaries of water: too little or too much, too dirty or too salty, too inaccessible, too stagnant, too hot or too cold. It is not

surprising that a substance so basic to all sources of life should have permeated philosophical, scientific, and religious thought. It became part of the moral and mental legacy parents passed on to their children. The suffering innate to a shriveled landscape or the abundance conveyed by the green of thriving crops was understood more in terms of water than any other requirements of plant reproduction. By the time the Europeans arrived in the New World, both the Spaniards and the American Indians had long-accepted value systems which incorporated attitudes toward water into basic dogma, not easily susceptible to dispute.

Because water availability or scarcity is paramount to much of the argumentation which follows, it was necessary to determine with some accuracy wet and dry years in the Southwest from roughly 1550 to 1850. Part of the process was cumbersome in the extreme, but rewarding nevertheless. During the course of my research in Spanish, Mexican, and southwestern archives, I took special note of any reference to weather generally, and precipitation specifically. Although over a thousand of such references were uncovered, I still found myself with vast chronological and geographical gaps. Dendrochronology came to my rescue. The Laboratory of Tree-Ring Research at the University of Arizona has published chronologies for almost two hundred locations in the Mexican north and the United States Southwest, making it possible to chart wet and dry years in northern New Spain for many centuries. Some of the data cover a period of more than a thousand years, but in almost all of the cases the beginning chronologies antedate the arrival of the Spaniards in the sixteenth century. They make it possible to approximate actual rainfall for some two hundred sites for every year from 1500 to the present.

Can historians have sufficient faith in these chronologies to apply them with assurance to their own research? The answer is unequivocally yes. Comparisons of the tree-ring analyses with the documentary evidence uncovered in the archives provide the kind of statistically valid independent verification that historians would love to have for other kinds of data. The comparisons give one tremendous confidence in the reliability of the dendrochronologies. In very few cases is there any discrepancy at all. If a government official, a soldier, or a clergyman reports to a superior that a drought has enveloped his area, or that the rains during the year have been more generous than usual, this information will almost always be reflected in the dendrochronologies for the same area at the same time. In those cases where minor variance occurs, one is often tempted to place greater faith in the chronologies than in the historical evidence. An official reporting that his region has experienced six years of severe drought

might be exaggerating, speaking metaphorically, or simply displaying a bad memory. If the dendrochronologies in this case establish four very dry years, preceded by a wet one and another dry one, the tree-ring analysis is probably the more reliable source. Throughout this study, in the absence of specific documentary citations, references to wet or dry years are supported by the dendrochronological evidence.¹

The chapters which follow are grouped into two major sections. Part I treats the influence of water on the development of the north, with special attention given to inter- and intra-racial conflict. Part II is concerned with conflict resolution and the adaptation of Spanish and Mexican jurisprudence and the respective judicial systems to the many unanticipated controversies that water produced. Neither part is designed to establish that the history of the Southwest is simply a product of water availability. The purpose is more modest, that of uncovering the role of water in the series of historical processes which gave the Hispanic Southwest its unique regional character.

I have eschewed the early temptation of one historically trained to present the major themes in a strict chronological fashion in the belief that in this case such organization not only leads to unnecessary repetition but, more importantly, tends to dissipate the overriding continuities of the water history of the Southwest. During the preparation of several early drafts I became increasingly convinced that traditional periodization does not lend itself to the study of the interaction of physical and human reality when technological change is most noticeable for its absence and when the highest levels of governmental authority are largely uninformed about and unresponsive to local needs. Rainfall in northern New Spain was not captured or put to beneficial use because a commandant general was appointed for the Provincias Internas. The Yaqui and Mayo rivers did not run full or scant because Father Hidalgo issued the Grito de Dolores. The irrigation networks in Tucson and San Antonio did not hold or break because José María Morelos was captured and executed. Crops did not prosper or wither in the Río Grande valley because Agustín de Iturbide conceived the Plan de Iguala, and the mines did not flood in

1. Data are available for Arizona, New Mexico, Texas, California, Baja California, Sonora, Chihuahua, Coahuila, and Durango. The four volumes published to date are Linda G. Drew (ed.), *Tree-Ring Chronologies of Western America* (Tucson: Laboratory of Tree-Ring Research, 1972), Linda G. Drew, *Tree-Ring Chronologies of Western America* (Tucson: Laboratory of Tree-Ring Research, 1975), Linda G. Drew, *Tree-Ring Chronologies for Dendroclimatic Analysis* (Tucson: Laboratory of Tree-Ring Research, 1976), and Jeffrey S. Dean and William J. Robinson, *Expanded Tree-Ring Chronologies for the Southwestern United States* (Tucson: Laboratory of Tree-Ring Research, 1978).

Baja California because Antonio López de Santa Anna sold the Mesilla Valley to the United States.

These truisms aside, not even an event as politically momentous as Mexican independence from Spain exerted much influence on conflict resolution, as the local judicial systems remained largely impervious to the change of sovereignty. With the passage of time the names and titles of officials changed, lines of reporting authority were altered, territories were realigned with new designations and new officialdoms, Indians were denied and subsequently granted citizenship, but in spite of all of the historiographical clamor about these changes their substantive import was negligible with respect to water. When individual citizens appeared before local magistrates to contest water allocations, they found that Mexican independence had not subverted Spanish judicial principle or procedure.

Perhaps the best example of the change in form, but not in substance, is the procedure used to obtain a land grant, with or without a water right attached. Throughout the entire colonial period the process was long, cumbersome, and litigious. It culminated in a formal act of possession. The individual acquiring title would go out to the land in question, accompanied by an appropriate royal official, would pull up some grass, turn over a small amount of soil, throw a few stones, and cry out: "Long live the King. Long live the Spanish Kingdom." After independence the entire complicated procedure remained almost identical, except in the act of possession the grantee, accompanied by the proper official, would pull up some grass, turn over a small amount of soil, throw a few stones, and cry out: "Long live the President. Long live the Mexican nation." In his study of the Southwest during the Mexican period David Weber has postulated that the judicial system remained Spanish with but few modifications.² He is certainly correct. Except in the most superficial sense the continuities were not broken by Mexican independence.



As in any undertaking of this kind, one incurs debts as he proceeds. It is a pleasure to acknowledge them while retaining responsibility for anything that might have gone wrong. Lawyer and Pecos historian Em Hall whetted my interest in the topic, not knowing that it would consume me for the next five years. William Taylor, with whom I

2. David J. Weber, *The Mexican Frontier, 1821-1846: The American Southwest Under Mexico* (Albuquerque: University of New Mexico Press, 1982), p. 38.

sparred in court in the water case of the *State of New Mexico versus R. Lee Amendt et al.*, convinced me on several occasions of the folly of my ways and, in the interest of documentary rigor, prompted me to buttress other arguments. Archivist Rosario Parra of the Archivo General de la Nación in Mexico City gave free and easy access to the huge corpus of documentation in their respective repositories. Susan Deeds helped in the process of converting a nineteenth- and twentieth-century historian into a colonialist. When paleographic frustrations set in, William Sherman was generous with his time. Murdo MacLeod's extensive bibliographic and historiographic knowledge in many fields repeatedly came to my aid when I needed to pursue a matter others might have considered esoteric. John Super, long interested in the agricultural history of colonial Spanish America, not only gave important documentary citations but also shared pertinent microfilm with me. Richard Greenleaf, Kieran McCarty, Meredith Schuetz, Paul Vanderwood, and Michael Murphy did the same. Charles Polzer made available to me his mammoth and unprecendented documentary guide, even before it was intended to be used by the historical public. In Mexico City colleagues at the Instituto de Investigaciones Históricas of the Universidad Nacional Autónoma de México, and especially Miguel León-Portilla, Roberto Moreno, Ignacio del Río, and Sergio Ortega, spent hours with me in the refinement of my approach. Marilyn Bradian never allowed the tedium of typing successive drafts to compromise her good humor. To each, I am grateful.

MICHAEL C. MEYER

CHAPTER 3

Water and Social Conflict

Social discord is born of many causes, some more morally reprehensible than others. Without question motivations no more laudable than greed and envy prompt some to appropriate the property of others. Almost invariably they are encouraged, directly or indirectly, by ineffective or corrupt officials whose lack of dedication to their public charge holds out high promise for impunity. The search for power, as a means to an end or an end in itself, also yields its share of group hostility. In conflicts of these kinds the pathologically weak are victimized by the strong, and they have little recourse. Some of the water disputes in northern New Spain can be attributed fairly to the moral reproaches of society. Spanish colonists knew from experience that water was a source of power and did not hesitate to use it in the quest for both material goods and influence. But not all water quarrels were rooted in the debased and selfish actions of the power seekers. The majority of conflicts pitting individual against individual and group against group were the product of an imperfect world in which scarcity came to dominate human action. In many years and in specific areas there simply was not enough usable water to meet the needs of all. In the disputes which ensued, the weak were also victimized by the strong, but at least they did have recourse to the administrative and judicial mechanism of the state. Some fared better than others.

Land disputes in the Hispanic Southwest were almost always based on contentions over water. No area in northern New Spain was densely populated. Land was readily available and in large quantities. Land with a reliable and permanent water source, however, was scarce.

As Spanish settlers moved into areas occupied by Indians, disputes arose, and they are often treated as land confrontations. As one begins to examine the documentation, it becomes obvious that in most cases it was not the land that was an issue, but rather the water that went with it.¹ Certainly there were some controversies over grazing land and boundaries, but in most cases land was not contested unless it was attached to a water source.²

It is not surprising that Spanish settlement of the arid far north was accompanied by heated contests over water. Spaniards vied for existing water supplies not only with the Indian populations but with other Spaniards. Spanish landowners with adjacent boundaries fought one another constantly in the effort to increase their water supplies.³ In addition Spanish clergymen and military men both believed that they were serving the Crown, but, when water was at issue, each group argued that its mission was supreme and, as a result, that its claims to water should be considered paramount.⁴ Each group rationalized that its own presence was needed to assure the happiness and tranquility of the surrounding Indian population, but the documentation suggests forcefully that in most cases Indian water interests were served by neither.

It is a common presumption that the majority of water disputes between Indians and non-Indians were registered between large and powerful Spanish hacendados and the neighboring Indian population. Controversies of this kind did indeed occur and often had dire results for the Indians. When hacendado Felipe Montano cut off the Indian water supply in the pueblo of Santa Cruz in southern

Chihuahua, the local inhabitants were forced to flee into the mountains "and search for food like deer."⁵ Some died because their water source had been denied. Other cases with similar results can be found in the surviving documentation, but most of the water controversies in the Mexican north pitted Indians not against hacendados, but against Spanish towns, presidios, missions, small Spanish landholders, and other Indians. The results, if often less dramatic, were no less dire.

In no way did water conflict in the Mexican north result from population increase. The decline of the native population in those decades following the original Spanish contact more than offset the number of Spanish and mestizo arrivals. Water controversy more properly was a product of demographic and economic change. Even though the total population of the Hispanic Southwest was less in the seventeenth century than it had been in the sixteenth, it was a much more concentrated population. Almost as a matter of faith, Spaniards considered seminomadic or widely scattered Indians as uncivilized. Not only were they beyond the effective reach of the missionaries and civil authorities, but, persisting in a non-European lifestyle, they were *gente bárbara*. Even when the grand design called for the Indians to serve as the agricultural labor force, they first had to be concentrated in villages or missions. Unlike the Anglo-American ideal of isolating the single-family farm, the Spaniards preferred the close human interaction that could be offered by the community. The Spanish penchant for town life and the concerted policy of bringing the Indian population together in missions strained water sources almost everywhere. The total amount of water available in the north easily could have supported a population one hundred times greater (even with limited technology), but it was not always available where it was needed and even less when it was needed.

More important than the demographic pressure resulting from the concentration of the population were changes in economic orientation. Private land and water ownership probably did not exist anywhere in the pre-Columbian Southwest; if it did, it was an extremely rare exception.⁶ With the Spanish settlement of the north and with the

1. Archival examples abound. For a sampling of New Mexico "land cases" that are in actuality water cases, see Joseph Vsesne Ortiz to Alcalde de Laguna, Sep. 26, 1816, Spanish Archives of New Mexico, I, 668, hereafter cited as SANM with appropriate information. Petition of Juan Antonio Iobano, Oct. 30, 1823, SANM, I, 1292; Pedro Martin and Fr. José Benito Pereyra to Senor Gov^{er} D^o Alberto Maynez, SANM, II, 2596; Bartolome Baca to Alcalde Constitucional de Alameda, Apr. 27, 1824, University of New Mexico, Seligman Collection. Hereafter cited as UNM SC with appropriate information.

2. Even the complicated and litigious Arisco land grant case in New Mexico has a strong water dimension. For the importance of acquias in this litigation see Richard E. Greenleaf, "Arisco and las Cruceñas, 1722-1769," *New Mexico Historical Review* 42 (Jan., 1967), 5-25. The eighteenth-century water disputes in Coahuila among the Vásquez Barreño, Ignacio Elizondo, and Sánchez Navarro families were also based on water. See Harris, *A Mexican Family Empire*, pp. 19-20, 24-26.

3. Struggles between Spaniards over water followed on the heels of the foundation of many northern settlements. This process is described for Coahuila in Harris, *A Mexican Family Empire*, p. 5.

4. See, for example, Pedro Antonio Albares de Azebedo to Governor, June 2, 1740, and June 4, 1740, AGN, Californias, Vol. 80, Exp. 28, and Capellan Antonio Tempis to Pedro Antonio de Alvarez, June 15, 1740, AGN, Californias, Vol. 80, Exp. 28.

5. Don Juan Tepeyuan, Casique del Pueblo de Santa Cruz to Gran Señor y tlatoani Mayor de Nuestras Terras . . . July 12, 1649, AHP, Reel 1653 B.

6. Private ownership of land, if it did exist in the Indian Southwest, would have been found most logically in those areas inhabited by sedentary agriculturalists. But Ralph M. Linton argues on the issues in the Pueblo region of New Mexico: "The Rio Grande Pueblos have had individual ownership of farmlands for many generations . . . this may be due to Spanish influence. . . ." See Linton's "Land Tenure in Aboriginal America," in Oliver La Farge (ed.), *The Changing Indian* (Norman: University of Oklahoma Press, 1942), p. 52.

introduction of capitalism, private ownership of land and private use of water became the norm. A well-watered piece of land could produce a profitable cash crop. Agricultural surpluses could be used to sustain the extension of the mission frontier. They could be used to foster the goals of the Spanish monarchy in its rivalry with other European interlopers. These notions were foreign to native American mentality and were bound to occasion conflict as a resource formerly controlled by the Indians themselves now had to be obtained from others.

Irrigation came to dominate agricultural practice to a much larger extent than ever before. But it was not the only new drain on the water reserve. Domesticated animals introduced by the Spaniards greatly increased water demand. Animal water consumption greatly surpasses that of humans, and the animal population, multiplying rapidly in the new environment, soon outnumbered the human population by many times. An eighteenth-century census for Nuevo Santander, for example, listed six settlements along the lower Río Grande with a total population (Indian and non-Indian) of 2,973. The number of livestock for the same six settlements exceeded 209,000.⁷ Over-grazing prompted soil erosion and reduced the normally scarce water supply. It was a classic example of ecoturbation. The cattle introduced by the Spaniards consumed the grasses more readily than they could regrow. The desert topsoil was slow to regenerate because the natural groundcover played a crucial role in its formation. In this process of desertification, aridity increased and with it the demand for additional water. There is strong documentary evidence that this particular ecoturbative problem prompted sporadic water shortages in the Pueblo region of New Mexico and indirect evidence that it plagued Arizona as well.⁸ Other new economic activities were water-consumptive also. A medium-sized mining enterprise demanded more water than a half a dozen towns or missions. Although the mines were only occasionally located immediately adjacent to a town, they nevertheless drew on the same limited water sources. It did not matter to town dwellers if their water was diverted one mile or seventy-five miles upstream. The introduction of new technology strained water reserves as well. Water was not used as a source of energy prior to the arrival of the Spaniards, but gristmills, powered by water, were used throughout New Spain by the eighteenth century.

Water conflict occurred occasionally in wet and normal years, but, not surprisingly, it manifested itself most dramatically in years of drought. Preliminary studies indicate that New Spain registered eighty-eight droughts between 1521 and 1821, some lasting for only a matter of months and others several years.⁹ Scarcely a decade passed without one. In addition, very localized droughts in restricted areas of the north must be added to the list of eighty-eight more general ones. On a few occasions water scarcity stimulated cooperation among potential competitors. The more general pattern, however, was for scarcity to engender conflict which almost invariably prejudiced the interests of the weak: poor Spaniards, poor mestizos, and most obviously, poor Indians.

When a new Spanish town, presidio, or mission was founded, existing Indian communities were generally guaranteed a share or percentage of the water supply. On many occasions, however, that percentage was subsequently reduced through both legal and illegal means. Spanish encroachments on Indian land almost always implied appropriation of the local water supply. The process occurred in different areas of the borderlands at different times and in varying degrees of intensity, but the process itself appeared to be inevitable.¹⁰ In her discussion of Spanish incursions in the Pueblo area of the Upper Río Grande valley of New Mexico, Myra Ellen Jenkins explains the phenomenon well:

The Pueblo Indians, already living in settled villages, became wards of the Crown, entitled to the full protection of the innumerable royal cedulas and viceregal and *audiencia* ordinances passed for the benefit of the Indians. The intent of Spanish law and administration was both to protect the Indians in their personal and communal land-water rights, and to convert them to the Christian religion so that they would be loyal vassals of the Crown. . . . Indian conversion, coupled with humane and equitable treatment of royal wards, however, was but one principle of Spanish colonial administration. Of comparable importance was the economic exploitation of the New World for the benefit of an expanding empire. Often these principles were incompatible.¹¹

9. Enrique Florescano, "Una historia olvidada: La sequía en México," *Nexos* 32 (Aug. 1980), 9-18.

10. For the water dispute between the heirs of Francisco Urdinola, founder of Saltillo, and the local Indian population, see Alessio Robles, *Francisco de Urdinola*, pp. 103-106.

11. Myra Ellen Jenkins, "Spanish Land Grants in the Tewa Area," *New Mexico Historical Review* 47 (Apr., 1972), p. 113.

7. Edwin J. Foscue, "Agricultural History of the Lower Río Grande Valley Region," *Agricultural History* 8 (1936), 128.

8. Sanders, *The Pueblo Indians*, p. 32.

There is some evidence to suggest that in New Mexico the process began in the early seventeenth century, prior to the famous Pueblo Rebellion of 1680, and indeed was one of the factors which combined with other religious and cultural conflicts to produce that major insurrection.¹² Shortly after the Spaniards were forced to abandon New Mexico and take refuge in El Paso, an Indian captive reported to them that Pope, the leader of the rebellion, had instructed all of the pueblos "to enlarge their cultivated fields."¹³ The implication of land and water pressure is certainly there, but the documentation is stronger for the late seventeenth and early eighteenth century, following the reconquest of the Pueblo region. Governors Diego de Vargas, Pedro Rodriguez Cubero, Francisco Cuervo y Valdez, and Gaspar Domingo de Mendoza made many land grants to individual Spaniards in the heart of the Pueblo region¹⁴ and in 1695 permitted the establishment of a new Spanish town, Santa Cruz de la Cañada. The founding document for the new town is clear in stating that the boundaries of the new settlement were not to extend into the lands of the Pueblos. The Spanish grant was made "as far as the Pueblos of Nambe, Pojoaque, Jacona, San Hilefonso, Santa Clara, and San Juan de los Caballeros."¹⁵ During the formal act of possession which took place a few days after the grant was made, Indian rights were even more clearly protected, as Governor Vargas specified: "I again made them [the Spaniards] their grant . . . revalidating their lands which belong to them and the boundaries set forth, and which limit the said pueblos mentioned in the said declaration . . . without prejudice to the boundaries of land which belong to each one [emphasis mine]."¹⁶ In spite of the unmistakable protections, land and water disputes were not long in surfacing as Spanish population in the Pueblo region increased

tremendously during the next century.¹⁷ Contentions over land and water dominated Spanish-Indian relations in the Tewa pueblos of Nambe, Tesuque, San Hilefonso, and Pojoaque.¹⁸

One of the best-documented water disputes between Indians and non-Indians in northern New Spain was the case of Taos and San Fernando de Taos against the Spanish settlers of Arroyo Seco, New Mexico. The case emerged at the end of the colonial period, but the actual decision was rendered in 1823, shortly after Mexico won its independence from Spain.

The Taos area of northern New Mexico had grown slowly during the colonial period. At the time of the Pueblo Rebellion of 1680, there were fewer than seventy-five Spaniards in the Taos Valley. The non-Indian settlement increased rapidly following the reconquest. In the eighteenth century, large Spanish land grants, especially the Cristóbal de la Serna Grant and the Antoine Leroux Grant, attracted many settlers to the north. By 1800, the Spanish population numbered about 1,330. As happened elsewhere in northern New Spain, growth occasioned conflict between Indians and Spaniards. In 1815 a major land dispute occurred when the Taos Indians charged that a group of Spaniards had settled on their grant. The *alcaldé* (justice of the peace), Pedro Martín, had what he thought was an easy solution. The Spaniards should pay the Indians fifty cows and horses for the land they had appropriated. The Indians angrily rejected the scheme and demanded that the *alcaldé* take the case to Governor Alberto Maynez in Santa Fe.¹⁹ The *alcaldé* did forward the case to the governor and advised that a bad decision could cause serious problems between Spaniards and Indians. The governor ultimately upheld the Indian rights to the land in question.

The land dispute of 1815, and its resolution by the governor, was the long-range cause of the water dispute a few years later. Some of the Spanish settlers who were forced to leave the Taos Pueblo founded the

12. The period is discussed thoroughly in France V. Scholes, *Church and State in New Mexico, 1610-1650* (Albuquerque: University of New Mexico Press, 1937), and in France V. Scholes, *Troublous Times in New Mexico, 1654-1670* (Albuquerque: University of New Mexico Press, 1942).

13. Myra Ellen Jenkins, "Taos Pueblos and its Neighbors, 1540-1847," *New Mexico Historical Review* 41 (Apr., 1966), p. 89.

14. Jenkins, "Spanish Land Grants," pp. 118-132.

15. The grant was signed by Governor and Captain General Don Diego de Vargas Luján Ponce de León, Santa Fe, Apr. 19, 1695, SANM, I, 882, contained in Microfilm of New Mexico Land Grants, Miscellaneous Archives, Reel 9.

16. "... y de nuevo les haze merzed . . . revalidandoles sus tierras q les pertenecen y terminos destinados y que caen a los Puchelos dhos en dho bando de Merzed . . . sin perjuizio de terminos de sus tierras q les pertenecen a cada uno . . ." Posesion y Juramento de dha Villa, Governor Vargas Zapata Lujan Ponce de Leon, Villa de Santa Cruz, Apr. 22, 1695, SANM, I, 882.

17. Judicial proceedings over land and water, pitting Spaniards against the Indians of Pojoaque, Nambe, San Hilefonso, Tesuque, and Santa Clara, are outlined in Jenkins, "Spanish Land Grants," pp. 113-134. Additional information can be gleaned from Auro de Alfonso Real de Aguilar, Santa Fe, June 14, 1715, SANM, I, 7, and Juan Perez Hurtado to Ignacio Roybal, Santa Fe, Sep. 18, 1704, SANM, I, 1339.

18. Some of these disputes, based upon the Twitchell documentary guide but not on the actual documents themselves, are discussed in Vlasich, "Pueblo Indian Agriculture," pp. 84-95.

19. "Espucinos éque los vecinos entregaron cinquenta animales, entre vacuno y cabayos . . . pero los indios lleno de petulantia renunciaron toda conbencion y esponen que S.S. subhanze el litiz. . ." Pedro Martín, *Alcaldé Interino*, and Fr. José Benito Pereyra to Señor Gov^{or} D^o Alberto Maynez, May 13, 1815, SANM, II, 2596.

village of Arroyo Seco, probably in 1815.²⁰ Arroyo Seco was located on a grant originally assigned to Diego Lucero and reassigned after the Pueblo Rebellion to Antonio Martinez. Under both Spanish landlords, the Tãos Indians claimed that they had been allowed to use part of the land for agriculture and to draw water from the Río Lucero (named after the first grantee).²¹ Shortly after the new village was founded, a few of the Spanish settlers, including Joaquín Sánchez and José Sánchez—who may or may not have held legal titles—sold portions of their land to the Tãos Indians.²² The Indian claims to the water of the Río Lucero thus had two bases: they had used the water for many years (and thus could claim prior usage), and they had more recently purchased land fronting on the Río Lucero and in that purchase gained additional water rights. The Indian claims seemed well founded, but did the Spanish settlers of Arroyo Seco have water rights as well?

At the request of the Governor of New Mexico, the case was heard by the *cabildo* of Tãos in March of 1823. The Arroyo Seco settlers argued that as descendants of the original grantees, they had founded their village in 1815 and since that time had irrigated their fields from both the Arroyo Seco and the Río Lucero. The Indians countered that they had used the water of Río Lucero even before the arrival of the Spaniards and in 1818 had purchased additional land with water rights on the Río Lucero. The Tãos *cabildo*, with Alcalde Juan Antonio Lobato presiding, ruled that the Indians had total right (*derecho total*) to the water on both grounds. But their total right did not mean that they were entitled to the total water of the Río Lucero. The Spanish settlers of Arroyo Seco needed water, too. Their other water source, the Arroyo Seco, as might be surmised from the name itself, did not supply them with an adequate water source. Therefore, the

20. The early history of Arroyo Seco and the water dispute with the Tãos Pueblo is discussed in Myra E. Jenkins, "The Río Hondo Settlement," (unpublished manuscript, 1974) and Jenkins, "Tãos Pueblo," pp. 85–114. Further information can be gleaned from Harold H. Dunham, "Spanish and Mexican Land Policies in the Tãos Pueblo Region," in *Pueblo Indians I* (New York: Garland Publishers, Inc., 1974), pp. 151–331.

21. There is no reason to doubt prior usage of the water from the Río Lucero by the Tãos Indians. When Fray Anastasio Dominguez visited the area in 1776, he reported that the lands were fertile . . . and those on the north are watered by the Lucero River." See Eleanor B. Adams and Fray Angélico Chávez (eds.), *The Missions of New Mexico, 1776* (Albuquerque: University of New Mexico Press, 1975), p. 112.

22. In litigation which followed, it was argued that Joaquín Sánchez, one of the Arroyo Seco settlers, hoodwinked the Tãos Indians by selling them land that was not his to sell but rather belonged to the legitimate heirs of Antonio Martín. Juan Eusebio García de la Mora to Governor Antonio Narvona, Santa Fe, Apr. 25, 1826, SANM, I, 389.

alcalde, speaking for the entire *cabildo*, awarded the Spaniards of Arroyo Seco one *surco*²³ of water from the Río Lucero when the stream was abundant and a proportionately lesser amount when water was scarce.²⁴ The settlement was an equitable one and forestalled new hostility between Pueblo Indians and newly arrived Spaniards.

Unfortunately, the reduction of Indian water supplies often precipitated violent confrontation. At approximately the same time as the Pueblo Rebellion in New Mexico, hostility surfaced some five hundred miles to the southwest in the Tarahumara country of Chihuahua. Spanish encroachments on Tarahumara water supplies began at least as early as the 1670s,²⁵ but major difficulties were still two decades away. A series of silver strikes were made in the 1680s at Coyachic, San Bernabé, and Cusuhiriatic. The population explosion which followed brought new pressure on Indian labor, land, and water and ultimately resulted in a series of rebellions in the 1690s.²⁶

To the west in Tucson, the reduction of Indian water supplies occurred later, but occurred, nevertheless. Throughout the late colonial period, there were four competing demands on the limited Tucson water supply: the Pima village of Tucson (on the west bank of the Santa Cruz River); the Royal Presidio of San Agustín de Tucson (on the east bank of the Santa Cruz); the communal mission lands of San Xavier del Bac; and the individual Indian plots of San Xavier. Whether living on mission lands or in their own pueblo, the Indians ranked low on the water priority scale.

Shortly after Father Eusebio Kino founded the Jesuit mission of San Xavier del Bac in 1700, new agricultural fields were opened there. For irrigation purposes water was drawn from the Río Santa Cruz and from a few small valley springs. This use caused no hardship during the years of normal precipitation, but during dry years irrigation at the mission prejudiced the Pima village of Tucson, north and downstream of the mission. Periodically, until the expulsion of the Jesuits in 1767, quarrels over water were recorded.²⁷ Seventeen-sixty-one was an especially bad year. Padre Manuel de Aguirre at the Mission of San Xavier del Bac reported to civil authorities that there was plenty of

23. A *surco* entitled the grantee or grantees to 3,081 gallons per hour, 73,944 gallons per day, or over half a million (517,608) gallons per week. For additional hydraulic measures see pp. 90–91.

24. "Seles escoda un surco de agua del Río de Lucero quando este en abundancia y quando este escaso seles dara a proporcion." Decision of Juan Ant^e Lobato, Oct. 30, 1823, SANM, I, 1292.

25. Pedro Cano to Joseph Garcia, Nov. 10, 1672, AHP, Reel 1671A.

26. Sheridan and Naylor (eds.), *Ranchari*, pp. 39–70.

27. Dobyns, *Spanish Colonial Tucson*, p. 62.

land for everyone, but not enough water to sustain the existing Spanish and Indian population.²⁸ A similar report reached Viceroy Bucareli in 1772,²⁹ but the situation went from bad to worse a few years later.

Shortly after the Franciscans replaced the Jesuits in the Pimeria Alta, the Spanish crown made the decision to move the presidio of Tubac north to Tucson. By the late 1770s many civilians had attached themselves to the military fort, and the local commander, Don Pedro de Allande y Saavedra, began making land grants to them. This added to the water shortages of the Pima pueblo of Tucson.³⁰ An accord was ultimately reached awarding three-quarters of the Santa Cruz water to the Indians and one-quarter to the presidio.³¹ But the agreement was not kept, and the Pima continued to be denied an adequate water supply. By the 1790s the situation was sufficiently serious that it was reported to the King by Franciscan Friar Diego Bringas:

... I must inform Your Lordship that since the presidio is so near the pueblo the farming practiced by the inhabitants and the soldiers causes a scarcity of water for the Indians. . . . For this reason, I humbly beg Your Lordship to order that the damage be repaired and that the Indians be permitted the water they need.³²

The Commandant General's office in Chihuahua City was not at all impressed with Bringas' accusation against the Tucson presidio. It simply reminded Bringas that an agreement had already been reached on the division of water.³³ Friar Bringas was furious at the lack of concern. Rather than simply referring to an old accord that was

28. Manuel de Aguirre to Governor Juan de Pineda, 1761, AGN, Provincias Internas, Vol. 17, Exp. 15.

29. Governor Mateo Sasre to Viceroy Bucareli, Oct. 19, 1772, AGI, Audiencia de Guadaluajara, 513.

30. Dobyns, *Spanish Colonial Tucson*, p. 67.

31. I have been unable to locate a copy of the agreement, but reference to it is made in at least two subsequent documents, one dated 1796 and one dated 1828. Galindo Navarro to Señor Comandante General, Chihuahua, Dec. 9, 1796, cited in Daniel S. Matson and Bernard L. Fontana (eds.), *Friar Bringas Reports to the King: Methods of Indocination on the Frontier of New Spain, 1796-1797* (Tucson: University of Arizona Press, 1977), pp. 67-75, and Manuel Escalante y Arvizu to Gobernador José María Gaxiola, Dec. 9, 1828, Archivo Histórico del Estado de Sonora, Film 12. Hereafter cited as AHES with appropriate information. The Arizona Historical Society holds a microfilm copy of this film. The particular document cited here was kindly brought to my attention by Kieran McCarty.

32. Galindo Navarro to Señor Comandante. Dec. 9, 1796, cited in Matson and Fontana (eds.), *Friar Bringas*, p. 66.

33. Matson and Fontana (eds.), *Friar Bringas*, p. 73.

not being honored, he argued, "it would have been more fitting to have decreed . . . that they should put the aforementioned provisions into effect. . . . Everyone knows that there are laws, but many do not respect them. It is not enough to tell them that the laws exist. They must be compelled to obey them."³⁴

Friar Bringas' recommendations fell on deaf ears. Action was taken shortly after Mexican independence, but it was scarcely what the clergyman had in mind. Manuel Escalante y Arvizu, the jefe político, wrote to Governor José María Gaxiola recommending a new formula for water distribution. The Indians, instead of being guaranteed three-fourths, should have their percentage reduced to one-half.

The little [Pima] town of Tucson is older than the presidio. For this reason it enjoys a water grant from a beautiful spring that gently irrigates the immense agricultural fields. The inhabitants of the presidio, because of a formal agreement, are limited to one-fourth of the water for agricultural fields that belong to the presidio.

I have stated to Your Excellency in all truth the reasons for the complaints and the ultimate decision of the citizens of Tucson (to abandon the presidio). Now it would be profitable for me to indicate the measures that should be undertaken to alleviate the problems.

In Tucson, more than in any other place, it is necessary to have a very active military commander, one who sleeps with his arms rather than his wife. The little [Pima] village of Tucson . . . has very few Indians who enjoy, through legal right, three-quarters of the water. It would be best to look for legal means to award the [Spanish] citizens of Tucson half of the water.³⁵

The Governor accepted the recommendation, and, when Tucson passed from Mexican to United States sovereignty with the Gadsden Purchase, the presidio, then called the colonia militar, had legal right to half of the water.³⁶ Why did the Indians of the Tucson area not rebel? Undoubtedly, the presence of the presidio first, and then the colonia militar, discouraged rebellion.

Similar scenarios were repeated all over northern New Spain and,

34. *Ibid.*, p. 80. Manuel de Aguirre to Governor Juan de Pineda, 1761, AGN, Provincias Internas, Vol. 17, Exp. 15.

35. Manuel Escalante y Arvizu to Governor José María Gaxiola, Dec. 9, 1828, AHES, Film 12.

36. Petition of Ignacio Saenz, Dolores Gallardo, Jesús Castro, and José Zapata to Governor José Agustín, May 6, 1852, AHES, Film 48.

after independence, in northern Mexico.³⁷ In the struggle for survival, Indians found themselves contending for water, and not very successfully, with Spanish towns, Spanish presidios, and individual Spanish settlers.³⁸ Even when Indians received water in amounts adequate to their needs, there were subtle reminders of Spanish priorities. At El Paso del Norte, the acequia designed to irrigate Indian fields was bled off the acequia madre, placing Indian water use at the mercy of Spanish landowners (fig. 3.1). In the Hermosillo region in the 1770s the local Indians received one day of water per week to irrigate their fields and orchards. Their designated day was Sunday.³⁹ Maybe the Spaniards needed one day of rest, the Indians obviously did not.

When the Indians found themselves on the short side of water allocations, they often asked for judicial relief, but their record in courts, with a few major exceptions such as the Taos settlement, left much to be desired. Armed with what they believed to be legal documentation to support their case, they were often turned away by officials who informed them that their papers were not valid,⁴⁰ or that if they were valid, their water right came not from the main river of their land, but from an arroyo that might carry water only a few weeks during the year.⁴¹ Mexican independence brought no relief to the Indian population. Although they were considered citizens for the first time, the same pressures for land and water continued. In most cases the Indians were at a decided disadvantage when litigation occurred. They were required to submit their titles to the proper authorities, and sometimes the titles were never returned.⁴² In the

37. In his study of water practices in the Pueblo region of New Mexico, James Vlasich has reached conclusions similar to those expressed in this work concerning the relative unimportance of Mexican independence in water disputes and resolutions. He concludes, "It can be generally stated that Mexican law concerning the Pueblo Indians was not much different than that of their Spanish predecessors . . . concerning water rights; Mexican law continued to implement the policies that originated under the Spaniards . . ." "Pueblo Indian Agriculture," pp. 117 and 118.

38. The struggle for water between the missions and the presidio of the San Antonio, Texas, area is synthesized in Joseph Antonio Rodríguez to Sr. Theop. Joseph Juachin Escal y Muzquiz, Dec. 3, 1721, AGN, Provincias Internas, Vol. 32, Exp. 6.

39. Juan Antonio Meave to Sr. Intendente de Pedro Corbaban, AGN, Provincias Internas, Vol. 91, Exp. 1.

40. It is not uncommon to find in the litigation phrases such as "es un instrumento simple alge no se le puede dar ninguna fee ni credito para proseguir cosas diligencias." Testimonios de los Autos Formados Sobre el Reparimiento de Tierras en la Colonia del Nuevo Santander Pertenciente a las Misiones de Californias, Año de 1770, AGI, Audiencia de Mexico, 1869.

41. Sobre posesion a los indios . . . en Las Bocas, gestion del P. Francisco Velasco, 1700, AHP, Reel 1700a.

42. Juan Ant^o Chaves to Sr. Sño de Estado y del Despacho de Justicia, Sep. 30, 1829, and Mar. 15, 1830, AGN, Justicia, Vol. 48, Exp. 19.

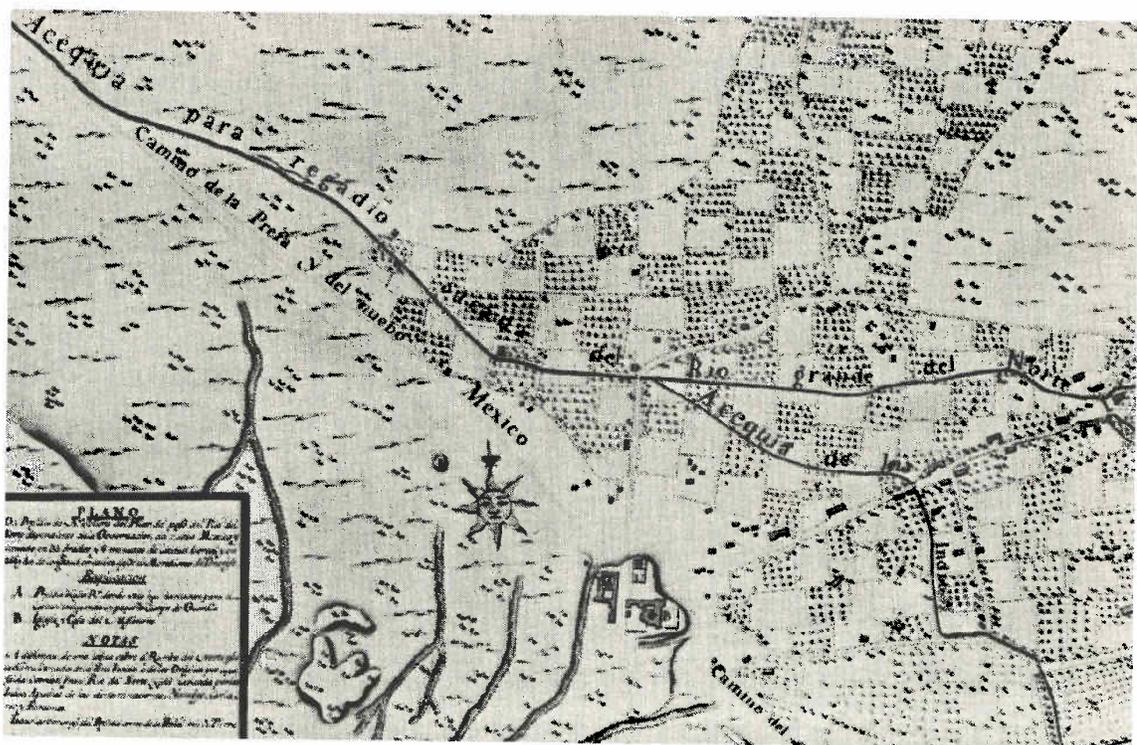


Figure 3.1 Map of irrigation system at El Paso del Norte, showing secondary acequia for Indian use. By permission of the British Library, courtesy Arizona State Museum

colonial period at least they had a *protector de indios* to represent them. After independence, they were on their own.

It is not unlikely that droughts increased an entire spectrum of social tensions in the Southwest even before the arrival of the Spaniards. The new water pressures which followed Spanish settlement simply exacerbated the problem. Examples from the seventeenth, eighteenth, and nineteenth centuries abound in the surviving documentation.

In 1645 Nicolás de Zepeda described the Tarahumara region of Nueva Vizcaya as experiencing a severe drought ("five years of barrenness in which it has not rained") during which Indian hostility increased dramatically: "so many deaths, so many robberies, so many dangers and so many enemies. . . ."43 In the next century Viceroy Antonio Maria de Bucareli attributed Indian hostility in Chihuahua to "the drought, the poor state of the horse herds, and the fact that the rains have not arrived."⁴⁴

Dendrochronology establishes that 1805 was the driest year in the history of colonial Texas. For the same year the archival documentation is replete with examples of greatly heightened tensions between Indians and non-Indians, and even between various groups of Indians. The Tahuaque rebelled;⁴⁵ Indians attacked a number of ranches, killing the inhabitants;⁴⁶ the Coco Indians attacked José Estrada and stole his cattle;⁴⁷ the Taboaya Indians engaged in constant raiding, pillage, and murder;⁴⁸ warfare broke out between the Tahuaques and the Tanacagues;⁴⁹ and the Lipan Apaches caused repeated depredations.⁵⁰ Relations between Indians and non-Indians in colonial Texas were not good in wet years either. None of these activities can be attributed only to a severe drought, but the lack of water seems to be significant in the mix of factors which precipitated inter- and intraracial hostility beyond that which was normal.

Throughout northern New Spain the missionaries learned that

water and the conflicts it produced had a major impact on the religious effort. Aridity sometimes helped and sometimes hindered the missionary process. When crops shrivelled because of the lack of rain or sufficient irrigation water, Indians who had previously resisted the proselytizing effort could be more easily persuaded to join a mission settlement administered by the local regular order. This phenomenon occurred in Tucson in 1768 when the summer rains arrived very late.⁵¹ It occurred again in 1796, when drought forced 134 Papagos to join the Tucson mission of San Xavier del Bac.⁵² But the attraction of mission life was often transitory. Centuries of Indian adaptation to life in the desert mitigated against the sedentary life of the mission. Where water is scarce, mobility makes it possible to take advantage of plant and animal resources in the effort to supplement a meager agricultural yield.⁵³ Indians who left the mission without permission were counted on the rolls of the apostates.

Many missionaries saw the aridity of the northern desert as a factor limiting their success. On occasion they were dissuaded from carrying the word of God to isolated Indian villages in a parched desert. Friars in seventeenth-century Coahuila reported to superiors that their venture into isolated Indian rancherías was not worthwhile. There was not enough drinking water to go around.⁵⁴ The Jesuits in Arizona reported exactly the same situation in discussion of the missionary effort among the Papagos. "These Papagos . . . cannot be served in their own lands, because of the total absence of irrigated cropland and even of drinking water."⁵⁵ The situation was not always better in some of the missions themselves. The Papagos at Father Kino's Mission of Remedios resisted Christianization because the missionaries "pastured so many cattle that the watering places were drying up."⁵⁶ On the Texas mission of Espíritu Santo, Indians were

43. Nicolás de Zepeda to Francisco Calderón, Apr. 28, 1645, DHM, Serie 4, Tomo III, Audiencia de México, 1242.

44. Antonio Cordero to Governor Juan Bautista Elquesaval, Apr. 20, 1805, BA, Reel 33.

45. Nemesio Salcedo to Governor Elquesaval, Apr. 23, 1805, BA, Reel 33.

46. Dionisio Valle to Juan Bap^e de Elquesav^a, May 6, 1805, BA, Reel 33.

47. Nemesio Salcedo to Governor Elquesaval, May 7, 1805, BA, Reel 33.

48. Dionisio Valle to Juan Bap^e de Elquesav^a, May 3, 1805, BA, Reel 33.

49. Francisco Viana to Juan Bap^e de Elquesaval, June 18, 1805, BA, Reel 33;

Francisco Viana to Gov. D. Antonio Cordero, Oct. 4, 1805, BA, Reel 33, and Compañía Presidial de Bejarán, Nov., 1805, BA, Reel 33.

51. Francisco Garcés to D. Juan de Pineda, July 29, 1768, DHM, Serie 4, Tomo II. In this dispatch Garcés reported that "Algunos [Indios] del Monte me had dado esperanzas que se agrarar[an] la la mision[es] y yo he prometido que si enfermo me llaman a confesion voy y que ire a ver sus ranchos que dichen estar faltos de agua."

52. John L. Kessell, *Friars, Soldiers, and Reformers: Hispanic Reformers and the Sonora Mission Frontier, 1767-1856* (Tucson: University of Arizona Press, 1976), p. 197.

53. This point is developed in Sheridan and Naylor (eds.), *Rancharia*, p. 72.

54. "... y por vivir en partes tan incomodas que no se puede ir en donde ellos viven por la escasez del agua. Lo que ellos beben es de magreyes pequeñas si no es en tiempo de aguas que cae algun aguacero y aun entonces es bien poca la agua."

55. Manuel Aguirre to Señor Teniente Coronel D. Juan de Pineda, Mar. 20, 1764, DHM, I, 126.

56. Quoted in Fontana, *Of Earth and Little Rain*, p. 45.

expelled from mission lands because of the lack of accessible water to be used for irrigation.⁵⁷

Water could cause major controversy for the men of God, and there are examples of Indian uprisings against missionaries who diverted waters designated for Indian plots to the mission lands.⁵⁸ The charges that the missionaries sacrificed Indian water interests to their own are as recurrent in the documentation as they are difficult to evaluate. Civilian officials and military commanders often found themselves in conflict with the clergy, and the accusations of water diversions come from these same civilian and military leaders. On occasion, they appear to be vindictive, exaggerated, and contrived, but at other times they have the ring of truth. There seems to be no doubt, for example, that in the 1740s Father Salvador de Amaya, head of the mission of Santa Maria de los Dolores in the Nuevo Reyno de Leon, believed that mission lands should carry priority over Indian plots.⁵⁹ He acted accordingly.

Ultimate responsibility for creating water hardships among the Indians may not rest entirely with the clergy, because clergymen often found themselves competing for the same water with nearby presidios or towns.⁶⁰ During dry years, soldiers simply helped themselves to mission water as they did in Santiago, Baja California, in 1740 and in Tucson, Arizona, in 1796.⁶¹ The clergy, in turn, passed the shortages on, but in the process mission lands seem to have taken precedence over individual Indian plots.⁶²

The rules and precepts which theoretically governed the northern missions were laudable in their expressed concern with the protection of Indian rights.⁶³ Civil law also concerned itself with Indian rights in

57. Del Wengier, "Wilderness, Farm, and Ranch," in *San Antonio in the Eighteenth Century*, p. 109.

58. Dn Joseph de Berrosteran to Dn Pedro de Ravago y Teran, Apr. 17, 1748, AGI, Audiencia de Guadalajara, 513; Joseph Antonio Rodriguez to Sr. Thérèse Joseph Juchin Ecaí y Muzquiz, Dec. 3, 1721, AGN, Provincias Internas, Vol. 32, Exp. 6, 59; Dn Fran^{co} Antonio de Echavarrí to Audior Gral de Guerra, Mar. 6, 1741, AGN, Provincias Internas, Vol. 32, Exp. 9.

60. As one example, the Pima mission of Tumacacori had to share its water from Rio Santa Cruz with the downstream presidio of Tibac. A weekly water rotation was instituted by Captain Juan Bautista de Anza. See Manuel Barragán, Francisco Castro, and Antonio Romero to Captain Pedro de Allande y Saavedra, Nov. 24, 1777, cited in Kieran McCarthy, *Desert Documentary* (Tucson: Arizona Historical Society, 1976), pp. 31-34. Hereafter cited as DD with appropriate information.

61. Autos seguidos en razon del agüaje y sitio registrado en nombre . . . 1740, AGN, Californias, Vol. 80, Exp. 28; Kessell, *Fronts, Soldiers, and Reformers*, pp. 197-198.

62. Berrosteran to Ravago y Teran, Apr. 17, 1748, AGI, Audiencia de Guadalajara, 513.

63. Charles W. Polzer, *Rules and Precepts of the Jesuit Missions of Northwestern New Spain* (Tucson: University of Arizona Press, 1976), *passim*.

the missions. As early as 1604, the Marqués de Montesclaros issued an ordinance guaranteeing an irrigated plot for each Indian who joined a mission.⁶⁴ But the rules, precepts, and laws were not always followed. There is no doubt that Indians were sometimes shortchanged in matters of land and water by the missionaries themselves. When José de Gálvez made his famous visita to New Spain, he was informed of charges (some valid, some exaggerated, and some inaccurate) that prompted him to issue detailed instructions for the governing of the missions in Baja California, one of the driest areas of the northwest desert. With the expulsion of the Jesuits from New Spain in 1767 and the assumption of the missions by the Franciscans the following year, there was great hope that a less-than-thriving Baja California could be revitalized. Plans were being made for the settlement of upper California, and the missions of the lower peninsula could perhaps carry out a supporting role. If they were to do so, however, they had to be placed in order themselves. The possibilities were good. When Gálvez toured the Baja California missions, he was appalled by their condition but found the soil and temperature adequate for a greatly increased agricultural yield.⁶⁵ A more equitable distribution of the scarce water reserves was fundamental to the process. In his report on the reorganization of the southern missions he ordered that once the mission lands had been marked out, all Indian heads of families should be granted irrigation land measuring fifty square varas. These plots were to be held privately, not communally, were to be legitimized through legal title, and were to be passed on from father to son. Realizing that water shortages, especially in the Mission of Santiago in the extreme southeast corner of the peninsula, might preclude implementation of the instructions, Gálvez further ordered that as many individual irrigated plots as possible be distributed, the older heads of families receiving them first. To accommodate those who were left without water when the distributions occurred, the missionaries were to encourage the digging of wells and the building of storage ponds.⁶⁶

The Franciscans and Dominicans followed Gálvez' instructions, and within a few years the missions in Baja California were flourishing. Private Indian lands and the communal lands were productive. In

64. Cited in Genaro V. Vásquez, *Doctrinas y realidades en la legislación para los Indios* (Mexico: Departamento de Asuntos Indígenas, 1940), p. 249.

65. Joseph de Gálvez to King, Sep. 18, 1768, AGI, Audiencia de Guadalajara, 415; Relacion del reconocimiento de la Bahía de San Bernabe en el Cabo de San Lucas, Sep. 1, 1765, AGI, Audiencia de Guadalajara, 416.

66. Instrucción para el Gobierno Civil y Economico de las Misiones del Sur [de California], Oct. 3, 1768, AGI, Audiencia de Guadalajara, 1768.

1775, for example, San Francisco reported "the sowings are about the same as in 1774 and with good results: two additional fanegas of land and fifty new garden plots have been brought under cultivation. They are irrigated by a new ditch and supplied with water from the dam that was repaired with stone and lime, leaving a pond of about a hundred varas."⁶⁷ The reports from Nuestra Señora de Guadalupe and San José Comondú were similar. Guadalupe increased cropland by two fanegas by building a new irrigation ditch, while Comondú planted new vineyards with water from newly built canals.⁶⁸ A similar process was also initiated in Sonora and Arizona shortly after the expulsion of the Jesuits. Although the results were not as spectacular, the shift from communal to individual cropland (*mitpos*) was evident.⁶⁹

José de Gálvez was not alone in his concern that mission Indians were being shortchanged in the allocation of water. Fray Antonio de los Reyes, later to become the first Bishop of Sonora, Sinaloa, and the Californias, reported to Viceroy Bucareli in 1772 that because of neglect and greed the mission Indians were worse off than those living in their own villages. He believed that it was against their very nature to be forced to work on the communal lands of the missions. They would do much better if they were allowed to work their own individual plots. But to do so, they had to be guaranteed water. Each family should therefore be given two plots of land: one, of two hundred yards square, would be unirrigated (*de temporal*), and the other, of the same size, would carry water rights with it.⁷⁰

Water conflict molded many institutions of government, as it was necessary for Spanish towns to appoint special water judges with a wide variety of functions. As early as 1563 a royal cédula ordered local officials to appoint water judges whenever necessary.⁷¹ The practice continued throughout the colonial period and during the first half of the nineteenth century, although the titles of these officials varied; some were called *comisionados*, others *alcaldes de agua*, others *juces de*

agua, and still others *mandadores*.⁷² Indian towns were supposed to have water judges, too, called either *topiles* or *alguaciles*, but in practice only the large Indian communities appointed special officials to take charge of water distribution.⁷³ In smaller Indian towns the Indian governors exercised the functions of the water judge.⁷⁴

In the case of the Spanish towns, on occasion the water judges were appointed from the ranks of the *cabildo* itself (an *alcalde ordinario* could at the same time serve as an *alcalde de agua*), but in other instances different officials held these positions. When water shortage was acute, a town might have more than a single water judge. In the case of the Presidio of Altar three or four water judges were appointed to apportion water among the ninety-two families in residence there in 1779.⁷⁵ No matter what the specific title or the number, the functions of the office were the same. When called upon by circumstance, the water judges were responsible for initiating and implementing strict rotations for water usage. They generally worked with a *mayordomo* or ditch boss who was charged with implementing the decisions. When water shortages threatened the vitality of a community, the *mayordomos* were ordered to "divide up the available water by turns, giving first one user, and then another, a fixed period of time so that everyone will have the chance to irrigate his fields."⁷⁶ Because physical conditions often made it necessary to set up the rotations on a twenty-four hour basis, and because few farmers preferred to irrigate their fields at night, irrigation times were drawn by lot.⁷⁷ If one individual irrigated out of turn, the violation would be reported to the water judge, who would make a determination, render a decision, and order its implementation.

Because water rights under Spanish law could be passed on from

72. Nombram to y Orden de Juezes para el Repartimiento de laguna, Santa Fe, July 16, 1720, SANM, II, 317a. Plan de Pñic, Art. 20, AGN, Tierras, Vol. 2773.

73. By the middle of the eighteenth century, every Indian town was to have "un topilo alguacil del Pueblo hade tener encargo de que no falte agua. . . ." Consulta que hace a S.M. Dn Fernando Sanchez Salvador, Alcalde de la S^a Hermandad. . . . Provincias de Sinaloa, Sonora y Costas del Mar del Sur, May 19, 1751, AGI, Audiencia de Guadalupe, 137.

74. Notifca^on a Antonio Zarillo, Gobernador de los Indios, Feb. 1, 1753, A. L. Pñari Colección, Bancroft Library, PE-51. Hereafter cited as ALPC with appropriate information.

75. Caballero de Croix to Exmo Señor Don Joseph Galvez, Dec. 23, 1780, AGI, Audiencia de Guadalupe, 272.

76. Juan Estevan Rebolledo, Dec. 15, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

77. Pedro de Rivera to Viceroy, Dec. 1, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3. . . . quando fueren escasas las aguas deban repartirse de suerte, que por tandas gozen de su beneficio."

67. Notas Relativas al Estado Actual de las Misiones Antiguas de la Peninsula de Californias, Feb. 25, 1776, AGI, Audiencia de Guadalupe, 515.

68. *Ibid.*

69. Cynthia Radding de Murrieta, "The Function of the Market in Changing Economic Structures in the Mission Communities of Pimeria Alta, 1768-1821," *The Americas* 34 (Oct., 1977), 155-159.

70. Albert Stagg, *The First Bishop of Sonora and Arizona: Antonio de los Reyes, O.F.M.* (Tucson: University of Arizona Press, 1980), p. 42.

71. Diego de Encinas, *Cedulario Indiano*, 4 vols. (Madrid: Ediciones Cultura Hispánica, 1945-1946), I, 69. The cédula is entitled "Que manda el Presidente y Oydores nombraren juez que reparara las aguas, cada vez que fuere necesario."

parents to children, the special judges were consulted when wills were called into question.⁷⁸ They also adjudicated a seemingly endless number of disputes among the living, punishing those guilty of water theft and those whose unattended cattle damaged irrigation ditches. When a pressing water issue faced the community, they were empowered to convene a general meeting of the entire citizenry to discuss how the problem might best be resolved.⁷⁹ In short, they comprised an integral part of a judicial system which adapted general Spanish jurisprudence to the exigencies of a society in which water was scarce. Their role was judged to be of sufficient importance that in 1704 a royal decree made them all subject to *residencia*, or judicial review, when their term of office expired.⁸⁰

If the special water judges had primary responsibility for the just distribution of irrigation and industrial water, the *cabildo* or ayuntamiento was charged with the chores of providing clean drinking water for the community. Towns located along a reliable river most often took their water directly from the stream. But when the flow diminished, either because of climatic changes or upstream diversions, the water stagnated and could cause health problems of major proportion. In instances such as this, it fell to the town council to devise a solution. Confronted with just this situation, the Chihuahua *cabildo* decided to build an entirely new potable water system in 1797.⁸¹

The *cabildos* or ayuntamientos shared responsibility with the *alcaldes de agua* in funding the construction and administering the principal irrigation ditch (*acequia madre*) which ran through or ran close to most towns. If the *acequia* was not carrying a sufficient water supply throughout the year, the *cabildo* could authorize the construction of a dam or reservoir to steady the supply. In Monterrey, Nuevo León, the local ayuntamiento not only ordered that a new dam be built in 1795, but also secured funding and provided prison labor ("presos . . . en la cárcel por pequeños delitos") for the construction.⁸² In Hermosillo, Sonora, the government contracted with a private citizen for

the work and provided him with Indian labor to do the job.⁸³ The Commandant General of the Provincias Internas, Teodoro de Croix, diverted funds from the presidio to pay for the supplies. In Chihuahua the 1,900 pesos needed for constructing a new municipal *acequia* came from the city's *propio* funds, an account replenished annually as the city rented out community land and sold community water.⁸⁴ Funding for a proposed dam in El Paso in the middle of the eighteenth century was raised by a special tax. All Spaniards and Indians were assessed four reales for every hundred grapevines they had under cultivation.⁸⁵

By the eighteenth and early nineteenth centuries numerous small frontier villages occupied the deserts of the Greater Southwest. Tiny communities of a dozen or two dozen families, they scarcely needed the formal bureaucratic structure of the larger towns. But most of them had at least one informal agency to supervise governmental affairs. Not surprisingly, it was the ditch or *acequia* association. The irrigators met annually to elect their *mayordomo* and to set a salary for his efforts during the coming year. As the only genuine official of the tiny villages, the *mayordomo* had prestige and competence extending beyond regulation of the local water supply. Even if the limited his activities to the *acequia* itself, however, he most assuredly earned his salary.⁸⁶

The controversies surrounding the *acequia madre* in northern New Spain are endless and their variety limited only by human imagination. By no means are all of them related to the apportionment of water. In a formally established town the *acequia madre* was generally built by the citizens and was considered common property. It was used not only for irrigation but also for the domestic water need of the town, for the watering of animals, for washing clothes, and for sewage and garbage disposal. It is obvious that these diverse uses are not entirely compatible with one another and, in spite of royal ordinances proscribing pollution of the water source,⁸⁷ those who lived down-

78. See, for example, Ygnacia Castro to Governor, Sep. 19, 1771, B.A., Reel II, and Marcos de Castro to Governor, Sep. 19, 1771, B.A., Reel II.

79. Auto de Obediencia, 1754, ALPC PE-51.

80. Real Cédula, May 10, 1704, cited in Antonio Muro Orejón, *Cadulario Americano de siglo XVIII: Colección de disposiciones legales indígenas desde 1680 a 1800 contenidas en los cadelarios del Archivo General de Indias* (Seville: Escuela de Estudios Americanos de Sevilla, 1969), pp. 123-124.

81. Anselmo Rodríguez to Viceroy, May 8, 1797, AGN, Alhóndigas, Vol. 11, Exp. 3.

82. Governor of Nuevo León to Viceroy, June 14, 1795, AGN, Provincias Internas, Vol. 34, Exp. 6.

83. Juan Honorato de Rivera received the contract in May, 1772. Thirty Opatá Indians were assigned to him. Pedro Corbalán to Fr. Mariano Buena y alcaide, May 5, 1772, AGN, Provincias Internas, Vol. 232, Exp. 1.

84. Anselmo Rodríguez to Viceroy, May 8, 1797, AGN, Alhóndigas, Vol. 11, Exp. 3.

85. Manuel Antonio San Juan to Governor Velez Cachupin, July 17, 1754, ALPC PE-51; Junta de los Verinos e Indios deste Pueblo, Feb. 9, 1755, ALPC PE-51.

86. See Simmons, "Spanish Irrigation Practices in New Mexico," pp. 140-141, and Roxanne Dunbar Ortiz, *Roots of Resistance: Land Tenure in New Mexico, 1680-1980* (Los Angeles: Chicano Studies Research Center Publications, 1980), p. 56.

87. Articles 122 and 123 of King Philip II's ordinances on the laying out of new towns

stream were often victimized by the carelessness of their upstream neighbors. Human excreta, kitchen and bathing wastes, and small dead animals dirtied the communal ditch. Chihuahua City found itself with an especially unhealthy situation caused by an incipient form of industrial pollution. Lead tailings from upstream mines polluted the municipal system and caused disease.⁸⁸ In the San Antonio missions, an area of extensive sheep grazing, the fleeces were washed in the acequia after the annual shearing.⁸⁹

Obviously there were no careful standards for drinking water in the Hispanic Southwest. But one did not need to count coliform bacteria or to evaluate concentrations of turbidity to be repulsed by the sight of fecal matter or scum floating on the domestic water supply. Because filtering methods were primitive at best, and chemical coagulation centuries in the future, the only answer was to prohibit the contamination at its source. The cabildos issued ordinances repeatedly to govern the use of acequia water. In Santa Fe, New Mexico, people bathed and engaged in "other filthy practices," ruining the drinking water of those downstream. Those who were caught were fined four reales.⁹⁰ The village of San Fernando in Texas had a similar problem but a more imaginative penalty. In 1775 Amador Delgado, the local alcalde, had to outlaw the washing of clothes in the acequia because those living further down were denied clean drinking water. His order stated: "Clothes will not be washed in the acequia of the city. Penalty for the woman or other person who violates the ordinance will be the confiscation of any clothes washed in the said acequia."⁹¹ An even worse problem was that of stray animals polluting the acequia. The

ayuntamiento of San Antonio de Béxar was forced to levy a fine of one peso against anyone who allowed his pigs to run loose.⁹²

Some northern towns, most notably those of California, developed simple pollution control systems. A laundry tank (*lavandería*), two or three feet wide and a couple of feet deep, could be found near the central plaza. Built with mortar and sometimes lined with tiles, the *lavandería* discharged the dirty water, not into the main acequia, but into the fields. Unlike the synthetic detergents in use today, the lye soap then in use did not damage the crops. The system helped assure a more healthful domestic water supply.⁹³ But Spanish Californians' early concern with environmental issues did not solve the water problems of a growing population. After Mexican independence the cabildo of Los Angeles issued repeated ordinances against laundering in the city irrigation ditch, against using it for garbage disposal, against leading waste pipes into it, and against building cesspools in the immediate vicinity.⁹⁴

The annual spring cleaning and repair of the acequia madre (not inappropriately called *la fatiga*) was a major community activity supervised carefully by the local cabildo. Debris and silt had to be removed, and, if erosion damage was apparent, the banks had to be reinforced. On many occasions the entire ditch had to be widened or deepened. If the acequia was the common property of the town, all persons who had used it during the previous year were required to participate in this activity under the threat of fine.⁹⁵ The number of hours to be devoted to the cleaning and repair was pro-rated to the number of hours each irrigator was entitled to water. After independence, the same practice prevailed. When the province of New Mexico articulated its legal statutes in 1826, a fine of four reales was authorized for any individual who did not participate in the annual cleaning, "two for his disobedience and two for the work he should have lent."⁹⁶

During both the colonial and early national periods, the wealthiest men in the community hired others to do their cleaning for them, but

specified that polluting activities were to be located downstream of the town. See Zelia Nuttall, "Royal Ordinances Concerning the Laying Out of New Towns," *Hispanic American Historical Review* 4 (Nov., 1921), 747. A detailed mining code adopted in 1783 reiterated that the mines could not pollute domestic water supplies, but they often did. See Ordenanzas del Tribunal General de la Minería de Nueva España, Mar. 22, 1783, in Eusebio Ventura Beleña, *Recopilación de todos los autos acordados de real audiencia y sala de crimen de esta Nueva España*, 2 vols. (Mexico: Universidad Nacional Autónoma de México, 1981), II, 262-263.

88. Anselmo Rodríguez to Viceroy, May 3, 1797, AGN, Alhondigas, Vol. II, Exp. 3, 89. Mardith K. Schuetz, "The Indians of the San Antonio Missions, 1718-1821," (Ph.D. dissertation, University of Texas, 1980), p. 272.

90. Lynn I. Perrigo (ed.), "Review Statutes of 1826," *New Mexico Historical Review* 27 (Jan., 1952), p. 71.

91. Don Amador Delgado, Alcalde de la Villa de San Fernando, Provincia de los Tejas, Jan. 15, 1775, BA, Reel 11.

92. Jose Anto Saucedo to Sr. Alcalde P^o D. Gaspar Horras, Feb. 5, 1824, BA, Reel 76. 93. For information on the *lavanderías*, see John Q. Ressler, "Indian and Spanish Water Control on New Spain's Northwest Frontier," *Journal of the West*, 7 (Jan., 1968), 15-16.

94. See John Caughney's direct testimony for the court in *Los Angeles vs. San Fernando*, p. A134.

95. Petition of Pedro Fuentes, Jph Antonio Busillos y Saballas, et al., Mar. 30, 1784, BA, Reel 15; Bando de Policía y Hordenes de buen gobierno, Jan. 10, 1802, BA, Reel 30.

96. Perrigo, "Revised Statutes of 1826," p. 70.

they had to provide horses and wagons and other equipment. Payment in kind was more common than payment in cash.⁹⁷ Female heads of household were assessed a tax in lieu of the actual physical labor.⁹⁸ Presidio commanders hired peones to clean and repair the ditches of the forts.⁹⁹ But there is some good evidence to suggest that in most cases the majority of the population participated directly. In Béxar, for example, the cleaning and repair of the community acequias, upstream and downstream, so depopulated the town that the residents requested troops be sent in to guard the women and children while the men were away.¹⁰⁰ This annual activity was considered so basic to the life of the community that when water requests were made, petitioners sometimes promised to do more than their fair share of the cleaning, hoping that this factor would have a positive impact on the granting agency.¹⁰¹ Similarly, when water disputes occurred in the late colonial period and early national period, the record of the cleaning participation of the contending parties was taken under advisement in the adjudication.¹⁰²

Not all acequias were community owned. Some were the property of individuals, others were owned jointly by a corporation of rural users, and still others were shared by a town or mission and a group of farmers who resided near that town.¹⁰³ Cleaning and repair of these ditches was the responsibility of those who had used them. Ditches of twenty or thirty miles in length were not uncommon. In Coahuila the

97. In eighteenth-century New Mexico, payment often consisted of stock animals or bulls. Two examples of this payment procedure for acequia work can be found in Autos de la Vista General de este Reino de la Nueva Mexico fechados por el Señor Sarg^{no} Mayor Dⁿ Joachin Codallos y Rabal Gov^r y Capⁿ Gral. . . . Aug. 16 to Oct. 20, 1745, SANM II, 470.

98. María Carmen Calvillo to Jefe Político, Oct. 29, 1823, Béxar County Archives, Mission Records G. Hereafter cited as BCA MR with appropriate information.

99. Pedro de la Fuente to Viceroy, Aug. 1, 1776, AGI, Audiencia de Guadalajara, 511. 100. Ayuntamiento to José Antonio Saucedo, Jan. 20, 1826, BA, Reel 26, and Mateo de Almada to Ayuntamiento, Jan. 25, 1826, BA, Reel 26.

101. One petitioner in Texas, hoping for favorable action on a request for a large amount of water, promised to match the number of acequia cleaners provided by all the other users combined: "... si los demás parcioneros pudiesen diez mozos, otros tantos pondre yo. . . ." Juan Manuel Zambrano to Governor Cordero, Jan. 1807, BA, Reel 35. The same kind of argument was advanced by Carlos Rodríguez in his water dispute with Joseph Saenz near Santa Rosa, Chihuahua. Carlos Rodríguez to Alcalde Mayor, Oct. 25, 1767, AHP, Reel 1767. See also María del Carmen Calvillo to Jefe Político, Oct. 29, 1823, BCA, MR 6.

102. Testimonio, Bernalillo, Nuevo México, July 18, 1829, UNM SC; Santa Ana—Angostura, and Ysabel Jorge, Phelipe Gallegos, and Antonio de Garrile vs. Xristopbal García, Jan. 7 to Feb. 9, 1733, SANM, I, 379.

103. The best discussion of the various patterns of acequia ownership is found in Wells A. Hutchins, "The Community Acequia: Its Origins and Development," *Southeastern Historical Quarterly* 31 (Jan., 1958), 261–284.

mission of San Bernardo de Río Grande had ditches totalling forty-four miles, and the neighboring mission of San Juan Bautista almost thirty-one miles. Cleaning and repair was an immense task which occupied the mission Indians for the entire months of February and March. On occasion, the friars had to hire non-mission Indians to help with the work.¹⁰⁴

Spanish law made special effort to guard the interests of those landowners whose property did not have a direct outlet to the water source. Through practice, custom, and law (*jus aqueductus*), an individual was allowed to construct an acequia on another man's land if there was no other way to conduct the water to his own.¹⁰⁵ A landowner could drive his cattle through his neighbor's property to water them (*jus aquae haustus*) if there were no watering holes on his own land.¹⁰⁶ Even the foundations of houses and churches could be altered so that water could pass through them.¹⁰⁷ It was also possible for an individual to be given permission by the courts to construct a dam on another man's property to feed an acequia which ultimately watered his own land.¹⁰⁸ In all such eventualities, however, the owner had to be compensated for any damage to the property on which waterworks were constructed.¹⁰⁹

By the eighteenth century, irrigation ditches crisscrossed most of the best land in the Hispanic Southwest. Because the water sources were sometimes distant, and because the shapes of farming plots were often irregular, on occasion the acequias had to be built across one another. This phenomenon caused innumerable difficulties among neighbors. One ditch owner could easily break down the canal of another while crossing it with his own. But more importantly when ditches crossed, unanticipated water diversion, or even water theft, could ensue. The situation in New Mexico was sufficiently serious to

104. Estado Actual de las Misiones de la Provincia de Coahuila y Río Grande de la Misma Jurisdicción, Año de 1786, cited in *Estudios de historia del noroeste* (Monterrey: Editorial Alfonso Reyes, 1972), p. 138.

105. Ayuntamiento de Abiquin to Jefe Político Santiago Abreu, July 4, 1832, Mexican Archives of New Mexico, Reel 15. Hereafter cited as MANNM with appropriate information.

106. Joaquin Escribhe, *Diccionario razonado de legislación civil, penal, comercial y forense* (Madrid: Calleja e Hijos, 1842), p. 650.

107. Manuel Martínez to Jefe Político, July 3, 1832, MANNM, Reel 15.

108. See Malcolm Ebright, "Manuel Martínez's Ditch Dispute: A Study in Mexican Period Custom and Justice," *New Mexico Historical Review* 54 (Jan., 1979), pp. 21–34.

109. Autos de la Vista General de este Reino de la Nueva Mexico fechados por el Señor Sarg^{no} Mayor Dⁿ Joachin Codallos y Rabal Gov^r y Capⁿ Gral de dho Reino . . . Aug. 16 to Oct. 20, 1745, SANM, II, 470.

prompt one alcalde mayor, Ignacio Sánchez Vergara, to issue a strong proclamation in 1813.

Those who must irrigate by bringing water from up above another ditch, should construct a flume (*canoa*) wherever the water crosses, so that owners of the other ditches will not be harmed and to avoid theft of water from one irrigation ditch to another. In such an event, other parties would be denied the benefit of their own work and would lack water they need, so that their crops would be held back and damaged. And he who does not build a flume when he should, must pay consequences, suffering four days of imprisonment in the public jail.¹¹⁰

Acequia disputes arose proportionately with the complexities of ownership, title, location, and use. Illustrative of the kinds of issues that could arise, and for which there was no easy answer, was a controversy that occurred in the San Fernando area of Texas in the late colonial period. A group of sixteen farmers constructed an irrigation ditch more than five miles in length from a water source to their cropland. Most of this main ditch was not on their property. At the point where it reached their own land, smaller ditches (*sangrias* or *contra-acequias*) were bled off the acequia madre to water the individual fields. As the builders and users of the five-mile acequia, the sixteen farmers gladly assumed responsibility for its maintenance, from the outlet to its end, even though it ran across the property of others. They even built bridges across it so as not to interfere with the activity of itinerant merchants and travelers.

During the course of years, however, Spanish population along the five-mile stretch began to grow and, with growth, problems ensued. Not only did persons living along the route begin helping themselves to the water, but they threw garbage into the ditch, broke down the banks, and even ruined several of the bridges with heavy carts. The sixteen farmers protested to the governor that they should no longer have full responsibility for the cleaning and maintenance of the ditch. Since their upstream neighbors were both using and abusing it, they should pay for their carelessness by contributing to the work that had to be done each year. The governor agreed and in 1806 ordered

everyone whose property fronted on the ditch to clean and maintain that section.¹¹¹

The compromise solution lasted for fifteen years, but in 1821 the upstream residents convinced the cabildo of San Fernando de Béxar that they should be relieved of their responsibility. It was not a community acequia and therefore the sixteen owners should clean and maintain it. The owners protested that a fair agreement had been reached and it should be honored. The cabildo responded that since the farmers could produce no formal documentation showing the order of an earlier governor, they would be obliged to maintain their own acequia.¹¹² The sixteen owners then decided to appeal their case directly to the current governor, Antonio Martínez.¹¹³ He was not convinced that the absence of a formal order by a previous governor should be a factor of great significance in the dispute. He told the cabildo that since the acequia benefited the entire population, it was only fair that the responsibilities be shared by all.¹¹⁴ Even though the acequia was not owned by the community, cleaning and maintenance was so basic to the prosperity of the region that all persons had to participate.

Water conflict was as constant in the Hispanic Southwest as was water scarcity. The bickering, although unremitting, was far from petty because the stakes were so high. Without access to water, personal ambitions remained unfulfilled, security was a far-fetched dream, and the hope for a better life nothing more than a chimera. Water was transcendent in its impact on the formation of social values, on the multifaceted activities of economic development, and on the major struggles for power among competing interest groups.

110. Los Ciudadanos Labradores de la Labor de Abajo . . . to Governador Antonio Martínez, Feb. 14, 1822, BA, Reel 70.

111. Sala Capular de San Ferm^{de} de Béxar, Feb. 14, 1822, BA, Reel 70.

112. Los Dueños de la Labor de Abajo to Governador Martínez, Feb. 22, 1822, BA, Reel 70.

113. Antonio Martínez, no date, BA, Reel 70.

110. Marc Simmons (ed.), "An Alcalde's Proclamation: A Rare New Mexico Document," *El Palacio 75* (Summer, 1968), 5-9. On occasion, small aqueducts were used in the Southwest to carry one water source across another, but the canoa or flume was most common. See T. Lindsay Baker, Steven R. Rae, et al., *Water for the Southwest: Historic Survey and Guide to Historic Sites* (New York: ASCE Publications, 1973), pp. 11-12.

Indian rights to water were not held in higher legal esteem than the rights of Spaniards to water, but neither were they held in lower legal esteem.⁴⁸

48. For the opposing point of view, skillfully argued, see Taylor, "Land and Water Rights," pp. 191–194. Support for the concept of theoretical judicial equality between Indians and Spaniards is found in Antonio Muro Oregón, "La igualdad entre Indios y Españoles," *Estudios sobre política indigenista española en América I* (Valleadolid: Universidad de Valladolid, 1975), pp. 366–386. François Chevalier agrees with Muro Oregón and argues that the purpose of incorporating Indian institutions into Spanish peninsular jurisprudence was to encourage "eventual equality." See *Land and Society in Colonial Mexico*, p. 190.

CHAPTER 8

The Adjudication of Water Disputes

From both a legal and a historical perspective, one of the most interesting and least studied aspects of colonial water law concerns the judicial criteria upon which legal disputes were resolved. The principles are varied, complex, and to some extent carry with them the possibility of internal contradiction. But, as Plato observed, and a score of philosophers subsequently echoed, justice would be a simple matter if only men were simple. The residents and judges of northern New Spain were not generally distinguished by their formal schooling, but even less were they notable for their simplicity. Spanish citizens, mestizos, and Indians learned quickly how to play the legal game. Judges recognized as a practical matter the need to reconcile the disharmony of man and nature in a hostile environment, and they also knew that they would be held accountable if they ventured too far from the spirit and intent of Spanish law.

When a water dispute occurred, the contesting parties almost always tried to work out the problem themselves. On occasion, they would call upon the local priest to serve as an informal mediator.¹ It is difficult to ascertain how many disputes were resolved informally, because these resolutions generally are not incorporated into the surviving documentation unless the agreement in question precipitated a subsequent dispute.

1. See, for example, Don Juan Tepeguan, Casique del Pueblo de Santa Cruz to Gran Señor y tlatoani mayor de nuestras tierras . . . , July 12, 1649, AHP, Reel 1653B.

When water controversies were carried to the appropriate governmental authority, the litigants were first asked to produce a just title for land or water.² During most of the sixteenth century, when land and water seemed plentiful and the Spanish population was small, local units of government made grants, and some of them large grants, as they saw fit, with little interference from higher officials. In the process, many Indian properties were abused, and there was great confusion even among titles to Spanish properties. By the late sixteenth century, the situation had gotten out of hand, and the Crown sought to tighten up granting procedures and clarify what had already been done. Recognizing the beauty inherent in order, in 1591 a royal cédula authorized the viceroys and governors to demand titles whenever a dispute occurred.³ Solorzano Pereira stressed the importance of this decree when he published his *Política indiana* some fifty-six years later and added that proof of just title could be demanded at any time by the viceroy and his representatives.⁴

From the time of the 1591 cédula, legal titles were extremely important in New Spain. If they were not prepared in the proper form, with the correct corresponding signatures of the granting authority, the witnesses, and the scribe, and with a description of the physical act of possession, they could be declared null and void. If all of the prerequisites were met but the documents were not prepared on official paper, their legitimacy could be called into question.⁵ The

2. The phrase ordering the title varied. "Hagan demostraciones de los títulos y mercedes." "Exhibe los títulos y papeles." "... notifique haga presente ante mí de los títulos y papeles que tiene." "... y traiga lo escritura de las tierras referidas." "... haga exhibir antesí las mercedes o títulos." "instrumento autentico de esa posesion. . . ." But no matter what the specific phraseology, the message was clear. The litigants were placed on notice that they had to present proper documentation to support their claims. For examples, see "Testimonio de los Autos formados sobre el Repartimiento de Tierras en la Colonia del Nuevo Santander Pertenciente alas Misiones de Californias, Año de 1770, AGI, Audiencia de México, 1869; Auto de Alfonso Real de Aguilar, Santa Fe, June 14, 1715, SANM, I, 7; and Juan Pérez Hurtado to Ignacio Koybal, Santa Fe, Sep. 18, 1704, SANM, I, 1339; Thomas Velez Capuchin to Philippe Lafoya, Feb. 4, 1768, SANM, I, 1351; Escrito de Gabriel de Vergara, Viseprefecto y Preside de las Misiones de co Sia crus de Queretaro, May 31, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3; Auto de Don Melchor Vidal de Lora, Gobernador y Comte Gral por S. M. De este Nuevo Reyno de Leon, Mar. 21, 1778, AGN, Tierras, Vol. 1018, Exp. 3.

3. Ois Capdequi, *El régimen de las tierras*, pp. 68-69.

4. *Política indiana*, Libro VI, Capítulo XII, 9.

5. Many official documents from throughout the Southwest were not prepared on paper bearing the official royal seal because local officials often ran out of it. The danger of invalidation was there, however, as the law was clear, "Papel sellado. El que está señalado con las armas del rey o nación, y sirve para autorizar las escrituras públicas, las diligencias judiciales y otros instrumentos, que si se hiciesen nulos en papel común." Escribche, *Diccionario razonado de legislación*, pp. 491-492.

new emphasis on just titles was one of those attempts on the part of the Spanish Crown to protect Indian interests. In the eighteenth century, when the intendat of the Provincias Internas, Henrique de Grimarest, ordered that titles be examined, he specified that it was the protection of the Indians he had in mind.⁶ But, like so many other attempts to guard Indian interests, this one backfired. If Spaniards had to produce their titles, Indians did also, and they were even more unlikely to have them, or, if they did, to have them in proper form.

Four of the few pueblos of New Mexico needed their titles in the nineteenth century, but in all four cases the Indians were unable to produce the documents because they had been lost previously. In the case of Tesuque, Indian witnesses testified in 1856 that their torn and tattered title was taken by a Mexican government official for copying and never returned. The case of the San Ildefonso title is similar: The local priest reputedly carried the document to Santa Fe for copying, and the Indians never saw it again. The Pojoaque title was allegedly used in a lawsuit tried before the alcalde of Chinayo. Bautista Vigil, and never returned to the pueblo. And the Nambé document was turned over to an acting governor of New Mexico to be used in pending legislation and never again seen by the Indians.⁷

Spanish petitioners for land and water on Indian property quickly learned that the just-title ploy could work in their benefit. Unscrupulous Spaniards hoodwinked Indians to turn over their titles to them; subsequently they would be bought and sold and even used as collateral for loans. Time after time, Spanish litigants demanded that authorities require the Indians to present their title, and in many cases they could not.⁸ The 1736 case of Baltasar Trujillo is a typical example. The Indians of the pueblo of San Ildefonso, in the upper Río Grande valley, charged that Trujillo was using their agricultural lands, their acquia, and their water without permission. An extremely complicated litigation followed. The Indians claimed that many years before they had lent Matías Madrid a piece of land so that

6. Henrique de Grimarest to Antonio Portier, Sep. 13, 1790, AGI, Audiencia de Guadalajara, 288.

7. Testimony of Governor of Tesuque, Carlos Vigil, et al., Taken before Surveyor General of New Mexico, June 14, 1856, Microfilm of New Mexico Land Grants, Pueblo Grants, Reel 7; Testimony of Governor of San Ildefonso, Arcenio Pena, et al., Taken before Surveyor General, June 28, 1856, *Ibid.*; Testimony of Governor of Nambé, Juan Rosario Padilla, et al., Taken before Surveyor General, Sep. 29, 1856, *ibid.*

8. "Suplico . . . que muestren los títulos . . ." Fran^{co} García to Carp^{ta} Xhobal ponce de Leon, June 9, 1688, AHP, Reel 1692A.

he could build a house on it.⁹ Through an entire series of inheritances and sales, the property, located in the middle of the Indian labores, ultimately fell into the hands of Baltasar Trujillo. By means of carefully presented testimony Trujillo was able to establish that earlier Spanish officials had certified the inheritances and the sales; Trujillo therefore held the property legally even if it had not been Madrid's to sell. But then Trujillo used his trump card. "The Indians of the said pueblo," he argued, "have not exhibited the title to their land."¹⁰ The governor of New Mexico upheld his claim to the land and water and in the process demonstrated the significance attached to just title. Other land and water disputes in which just title assumes a major role abound in the surviving documentation.¹¹

A second consideration was the doctrine of prior use or prior appropriation, a concept generally argued on the basis that the water in question had been used *de tiempo inmemorial*, or *de costumbre inmemorial*.¹² The doctrine of prior use is almost invariably misunderstood. It was not an absolute concept that overshadowed all other factors in the distribution of water.¹³ It did not mean that whoever had used a water source first was entitled to continuing use without regard to the well-being of others. It was, however, a very important consideration in the allocation of water and one which the Indians of northern New Spain used to their advantage in water disputes. It could help sustain a water right in the absence of title or other legal documentation and could help assure a favorable allocation in a repartimiento de aguas. The Spanish concept of prior use in water disputes dates back at

least to the thirteenth century. The *Siete partidas* does not develop the doctrine with any degree of specificity but leaves no doubt that prior use was an established legal principle. The *Partidas* first define usage as that which evolves "from what men say and what men do continuously for a long period of time and without being obstructed."¹⁴ The issue of no obstruction was crucial to the principle, as the Spanish did allow early objection to a new usage by a process called *denuncia de obra nueva*.¹⁵ The doctrine is subsequently made directly applicable to water disputes.

If a man has been awarded the right to conduct water, to irrigate his property, from a source that rises on another's property, and if later the owner of the source wishes to give that right to another person, he will not be permitted to do so without permission of the person who *first* [emphasis mine] was extended that right.¹⁶

The prior-use doctrine was mutated with the passage of time. As the legal doctrine developed, it became apparent that prior use was not synonymous with oldest use. When Joseph Miguel Losano of Nuevo León found himself disputing water ownership with his neighbor Juan Nepomuceno de Larralde, in 1778, he argued that the law should not only respect but should give priority to the length of time that contending parties had held their titles.¹⁷ He clearly believed that the longer a title was held, especially if it was uncontested, the more secure it became before the law. The argument he put forth was an old one but not as persuasive as that of his opponent, who conceded that Losano's right antedated his but who turned the prior-use argument in his own favor. His water right was a newer one, but it was granted with the full realization that Losano held an older right. The newer right should, therefore, prevail.¹⁸ In this case it did. Larralde won his water and made clear that a firmly established newer use was a type of prior use that was taken into account in water conflict. Many Spaniards, and after independence many Mexicans, incorporated the

9. Philippe Tatorra, to Señor Gov' y Capp' Graal, 1763, SANM, I, 1351.

10. Gervasio Cruzat y Góngora, Governor of New Mexico, Apr. 7, 1736, SANM, I, 1351.

11. Los Ciudadanos Juan M^e Moquino, Andrés de la Candelaria y Anr^e de la Cruz, Año de 1829, AGN, Justicia, Tomo 48, Exp. 19; Juan Nepomuceno to Sr. Gov' y Comandante Graal, 1775, AGN, Tierras, Vol. 1018, Exp. 3; Testimonios de los Autos Formados sobre el Repartimiento de Tierras en la colonia del Nuevo Santander Pertencientes a las misiones de Californias, AGI, Audiencia de México, 1369.

12. Other variations of the same concept are embodied in the phrase "consumere tan antigua de q' no hay ya memoria en los hombres," José María Ortuño to Sp^e Fiscal de lo Civil de Monterrey, AGN, Tierras, Vol. 1395, Exp. 11.

13. A typical misunderstanding and exaggeration of the doctrine is voiced by James M. Murphy, who states that "the law, in effect, said the water was public property, and whoever got there first and used it had prior rights over all others." See Murphy, *The Spanish Legal Heritage in Arizona* (Tucson: Arizona Pioneer Historical Society, 1966), p. 15 ff. Murphy's treatment of the application of Hispanic water law to Arizona after the Treaty of Guadalupe-Hidalgo is very helpful. The weakness of his analysis, however, rests with the fact that it merely juxtaposes the riparian tradition of common law with the prior-appropriation tradition of Roman law, not recognizing that the latter is only one of many important water considerations in the Spanish and Mexican legal systems.

14. *Partida 1, Título 2, Ley 1.*

15. Escriche, *Diccionario razonado de legislación*, p. 181.

16. *Partida 3, Título 31, Ley 5.* Similarly, the *Siete partidas* authorized the use of running water for purposes of powering a mill only if the water was not diverted from the owner of an already established mill. *Partida 3, Título 32, Ley 18.*

17. "La ley deve atender la anterioridad de tiempo en el título," Joseph Miguel Losano to Governor Melchor Vidal de Lorca, Mar. 1778, AGN, Tierras, Vol. 1018, Exp. 3.

18. When Losano argued "que el que es primero en tiempo deve ser preferido en dño," Larralde countered with "que el que es primero en dño deve ser preferido en tiempo." See Juan Nepomuceno de Larralde to Gobernador Vidal de Lorca, 1778, AGN, Tierras, Vol. 1018, Exp. 3.

phrase *de tiempo inmemorial* in the adjudication of their water controversies.¹⁹ Sometimes it helped them, sometimes it did not.

In an unusually perceptive study, William Taylor characterizes prior use as "a type of superior right, but it did not usually serve to establish exclusive rights for the oldest user, especially if there were surplus waters."²⁰ This conclusion is, without question, correct, and at least one New Mexico water case between Indians and non-Indians, *Taos versus Arroyo Seco*, suggests forcefully that prior use could not sustain a claim to exclusivity even when water was scarce.²¹ Prior use was a carefully controlled legal principle. Spanish jurisprudence recognized that it held within it the seeds of contradiction and conflict. In its legal definition, therefore, it spelled out the conditions necessary for judicial application:

Use is the custom, general practice, or *modus operandi* that has been imperceptibly introduced and has acquired the force of law. Prior use is founded on the tacit consent of the public that observes it, of the courts that conform to it, and the legislator that permits its application. . . . Prior use contrary to reason or to good custom can never acquire the force of law, because in such a case it can be considered no more than an old mistake, being less a use than an abuse and an infraction of law: *Mala enim consuetudo, non minus quam perniciosa corruptela, obliquenda est et vitanda: quod contra bonos mores esse dignoscitur, omnino abolendum est.*²²

A third fundamental criterion was need. This concept is a significant factor in water legislation, as a number of laws in the *Recopilación* and elsewhere call for a distribution on the basis of what is needed to sustain a family.²³ Article 20 of the Plan de Pitec appoints a special water judge so that the available water will be distributed in proportion to the needs of the respective plantings.²⁴ Other municipal ordinances specified that if any individual was not using water granted to

him, and others needed the water, the original grant should be revoked.²⁵ Even in the case of a spring or a well originating on a piece of private property, the most privatizable kind of water supply, the owner could not deprive his neighbor of its use simply by wasting that which he did not need.²⁶ Need is also incorporated into many petitions for water mercedes and compositiones, and it is invariably included in requests for sobras.²⁷

A typical example is the early nineteenth-century petition of Francisco Xavier Ortiz and his two sons, José and Juan Antonio, for land and water from the sobras of the Indian pueblo of San Ildefonso. Ortiz argued to the jefe político that he had served the Crown for years without salary. Neither he nor his sons had anything with which to sustain themselves. And then he made his final appeal, "Nobody more than you knows that need in which we find ourselves."²⁸

As important as need was in requests for water, it was even more important in the adjudication of subsequent water disputes. Guidelines for the settling of water controversies promulgated in Santa Fe in 1720 ordered that water judges "divide the water always verifying the greatest need . . . and giving to each one that which he needs."²⁹ This order was scrupulously followed. Not only is need one of the criteria upon which water decisions are made,³⁰ but, in some cases at least it is clearly the most important factor. In the water dispute between the Pueblo Indians of Taos and the Spaniards of Arroyo Seco, the latter had a very weak case to plead except for the fact that they needed the water. In the decision handed down, they received their water allotment almost entirely on the basis of need.³¹ Similarly, when Margarita de Luna, an eighteenth-century New Mexico widow, disputed water with her neighbors, she built her case on the doctrine of need. A

25. Bandos de Policía y Hordenes de buen gobierno [San Antonio de Béxar], Jan. 10, 1802, BA, Reel 30.

26. *Novísima recopilación*, Libro III, Título 28, Ley 31. The doctrine of need might well be traceable to the Moorish legal tradition. The Koran taught that the withholding of surplus water from a neighbor who needed it was a sin against Allah.

27. Petition of Martín Fernández to Governr y Capñ' Graal for Sobras del Distrito Xpobal de Lazerna. . . . 1724, SANM, I, 217; Petition of José María Gallego to Diputación Territorial, 1825, SANM, I, 338; and Petition of Bartholome Lobato to Governor Juan Ignacio Flores Mogollón, 1714, SANM, I, 483.

28. Francisco Xavier Ortiz to Sor. Gete Político, Feb. 19, 1824, SANM, I, 1293. 1720, SANM, II, 317A.

30. Sec. for example, Manuel Martínez to Jefe Político, July 3, 1823, SANM, Reel 15, I, 628; Juan Eusebio García de la Mora to los Señores Vigiles. . . . Aug. 28, 1836, SANM, SANM, I, 389.

31. Juan Antonio Lobato, Oct. 30, 1823, SANM, I, 1292.

19. The phrase is common in water litigation. Sec. for example, Petition of Manuel Lucero, Pablo Lucero, Rafael de Luna et al., Aug. 4, 1836, SANM, I, 628.

20. Taylor, "Land and Water Rights," p. 203. Taylor's conclusion is repeated in Vlasich, "Pueblo Indian Agriculture," p. 80.

21. Juan Eusebio García de la Mora to Governor Antonio Narvona, Apr. 26, 1836, Santa Fe, SANM, I, 389; Decision of Juan Amor Lobato, Oct. 30, 1823, SANM, I, 1292.

22. Escriche, *Diccionario razonado de legislación*, p. 686.

23. Sec. for example, *Recopilación*, Libro III, Título 2, Ley 63, and Libro IV, Título XII, Ley 14.

24. "Para que estos disfruten con equidad y justicia el beneficio de las Aguas, a proporción de la necesidad que tuvieren sus respectivas siembras, se nombrará anualmente por el Ayuntamiento un Alcalde. . . ." Plan de Pitec, Article 20, AGN, Tlerras, Vol. 2773, Exp. 22.

representative of the alcalde mayor confirmed her dire situation and reported his findings with a bit of attempted humor: her crops had dried out to such an extent "that not even if she irrigated them with Holy Water could they be saved."³² Ultimately, she won her case.

The protracted and litigious *acquia* dispute between Pablo Montoya and the Indians of Santa Ana also found the doctrine of need occupying a prominent role. The final resolution of the case by the court in Santa Fe is dated August 1, 1838. It states that Pablo Montoya's crops were dying for lack of water; that he was in possession of documentation establishing his right, and that he needed the water. In one of the strongest declarations ever of the doctrine of need, the court held that "even if he didn't have legal right, need is supreme to all laws."³³

Related to need, but different in its application, was a fourth criterion, the concept of injury to a third party. The roots of this legal principle are found in Iberian legal history, but it was applied to Mexico as early as 1535.³⁴ Because of the doctrine of royal patrimony, the Spanish Crown was the first interested party in any water allocation and the person making the request was the second, but Spanish law was clear on the need for protecting the interests of any third party. The concept has within it the germs of the law of equal freedom developed in the nineteenth century by Herbert Spencer: "Every man has freedom to do all that he wills provided he infringes not the equal freedom of any other man." Spanish jurisprudence recognized not only the equal rights of legal contenders but also the potentially competing interests of the state.

The special phraseology of the doctrine of injury to third party varies from document to document. A typical rendition is contained in the 1707 grant made to Captain Tomás de la Garza Falcon in Coahuila: "I make this grant without prejudice to the Royal Patrimony nor to any third party who might have a better right."³⁵ When water

32. Margarita de Luna to Governor Pedro Ferrn de Mendinueta, Feb., 1770, SANM, I, 657.

33. "... le de el agua al enunciado Montoya pues v save q' aun Quando no tubiera Dro La Necesidad hes la suprema de todas las leyes. ... Salvador Montoya to Alcalde de Santa Ana, Garcia Montoya, Aug. 1, 1838, UNM SC. The pace of justice in this case was intolerably slow, as more than twenty-five years passed between the original contention and the final resolution. The interminable delays were not unusual. A similar case in New Mexico between Indians from Sandia and a neighboring Spaniard lasted from 1829 to 1841. See Los Ciudadanos Jose M^o Moquinno, Andrés de la Candelaria y An^e de la Cruz, AGN, Justicia, Tomo 48, Exp. 19.

34. Cédula dirigida al Virrey de la Nueva España en que se le permitió "... ciertas tierras, Encinas, *Cadulero indiano*, I, 65.

35. VE Aprueba y confirma la merced ynserta hecha al capial Don Thomas de la Garza Falcon, Feb. 1, 1707, AGN, Mercedes, Vol. 74, Fols. 109-110.

grants were made to Spaniards in Indian areas, the no-prejudice clause often singled the Indians out for protection. Thus, when Pedro Cano asked for a water grant in the Tarahumara region of Chihuahua in 1672, he specified that such a grant would not be "in prejudice to the Indians, who live quite a few leagues away, nor to any other third party who might have a better right."³⁶ Similarly, when a water diversion project was planned for El Paso, the petition argued that the project would be implemented "without prejudice to the Indians or any other third party."³⁷

Requests for water or for additional water were almost always subjected to the third-party test, and the test took many different forms. Witnesses could be summoned to testify on the probable impact of a water grant. If testimony were inconclusive, the granting authority would commission independent experts, called either *peritos* or *veedores*, to make an on-the-spot analysis and a recommendation.³⁸ The inspection process was known as a *vista de ojos*, a *vista ocular*, or a *recomandamiento*. The steps are revealed in a 1744 account from Sonora.

In the Royal Presidio of San Pedro de la Conquista on the nineteenth day of the month of July in the year seventeen hundred and forty-four, I, the said Allerez Don Salvador Martín Bernal, together with official measures and witnesses, went out to study the water outlet that the documentation in my possession refers to. Having examined the bank of the River from this Royal Presidio to a rocky hill that is located about a half a league distant from the east bank of the River, I could not discover any other place where the outlet could be made to irrigate the said fields and even this outlet will be costly. Finding that it would not cause prejudice to any third party, I designated this place as the outlet and entered it in the document which I signed with the above-mentioned official measures and witnesses and to which I attest with full faith and credit.³⁹

If injury to a third party was demonstrated, either by testimony or by the *vista de ojos*, the request would be denied.⁴⁰ But the third-party

36. Pedro Cano to Joseph Garcia, Nov. 10, 1672, AHP, Reel 1671A.

37. Testimonio de Diligencias ... capitulo veinte, Año de 1754, ALBPC PE-51.

38. Declaración de todas las Tierras de Lavor, July 8, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

39. Reconocimiento de Salvador Martín Bernal, July 19, 1744, AGN, Provincias Internas, Vol. 247, Exp. 3.

40. Examples of water requests being denied because of injury to third parties are contained in Juan Bauputisa Montano to Governor Pedro Ferrn de Mendinueta, 1767, SANM, I 573, and Xpobal Torres, Alcalde Mayor de la Villa Nueva de Santa Cruz to Xpobal Tafola, June 10, 1724, SANM, I, 942.

test had other ramifications as well. Not only could it be used to sustain or deny a water request, it could also influence the specific nature of a water grant. In 1715, for example, Diego Arias asked for a water grant near Santa Fe. Some of his neighbors protested that, if the grant was extended, a pond lower on the stream would be denied its water. The governor of New Mexico, Juan Ignacio Flores Mogollón, recognized that the lower users might indeed be prejudiced. He decided to make the grant, but with conditions. The size of Diego Arias' new pond was to be limited to six varas square (a little less than 36 square yards), its depth was regulated, and, finally, if these conditions did result in injury to third parties, the Arias pond would have to be opened so that sufficient water could flow downstream.⁴¹

A variation of the principle of no injury to third party was the notion of least injury to third party. Access to water often required that the outlet (the *saca de agua* or *toma de agua*) and the acequia be located on another person's land. Spanish law stipulated clearly that water access in these areas superseded rights to private domain. The outlet could be used because the banks of rivers were considered part of the river, and thus belonged to the royal patrimony. The acequias could cross another person's land because of the law of *servidumbre del aguaducto*, which was defined by Lasso de la Vega as "the right to conduct water through others' property to irrigate one's own, or someone else's, as provided for in the law of right-of-way."⁴² In either case, however, the outlet or the acequia had to be constructed in such a manner as to cause least injury to the third party.⁴³

A fifth important criterion was intent. Why did a petitioner or group of petitioners want more water? How did they intend to use it? Were their goals in harmony with those of the larger community? Most importantly, what was the intent of governing officials with respect to this water?

In the absence of strong competing reasons, water for mining operations was generally approved because the government intent was to increase Crown revenue from the mining tax, the *quinto*. It was not unusual that Felipe de la Cueva Montano, in contending with Indians for water he needed for a silver mine, reminded authorities "of the considerable sum paid to His Majesty in quintos each year."⁴⁴ When a

new mining code was adopted in 1783, special provisions were included to guarantee an adequate water source for all mines in New Spain.⁴⁵ Similarly, water to irrigate wheat always carried high priority because this grain was in high demand in northern New Spain. Land and water for presidios, where the intent was to increase national defense, also ranked very high.⁴⁶ Local military officials were sometimes empowered to alter existing water distributions in the interest of national defense.⁴⁷ In the case of presidios, government intent for water usage came very close to bordering on the doctrine of eminent domain. In eighteenth-century Coahuila, for example, Teodoro de Croix, the first commandant general of the Provincias Internas, seized the property of a privately owned hacienda so that its land and water could be used to establish a new presidio, badly needed to guard against Indian attacks.⁴⁸

Government intent was not a constant throughout the colonial period. It varied with perceived needs from time to time and from place to place. In the 1780s, officials in Mexico City decided that New Spain needed cloth from Texas. They ordered local authorities to make water available to the mission Indians for the express purpose of hemp cultivation.⁴⁹ The order was carried out.

Petitions for water often tried to anticipate government intent. Missionaries asking for water seldom forgot to remind granting authorities that the king intended the Indians to be relocated in missions and converted.⁵⁰ When Captain Diego de Quiros asked for water for his Chihuahua mine, he reminded the governor of Nueva Vizcaya, Joseph García de Salcedo, that the king was very interested in the mining tax.⁵¹ The grant was made. Similarly, Captain Andrés López de Gracia wanted a grant of land and water in the Valle de San Antonio de Casas Grandes in Nueva Vizcaya. Knowing that it was the

45. Ordenanzas del Tribunal General de la Minería de Nueva España, May 22, 1783, in Beña, *Recopilación sumaria*, II, 214-292.

46. Pedro Antonio de Albares to Governor, June 14, 1740, AGN, Californias, Vol. 80, Exp. 28.

47. Diego de Borica to Señor Caballero de Croix, Oct. 20, 1778, AGI, Audiencia de Guadalajara, 270.

48. Teodoro de Croix to José de Galvez, Dec. 28, 1778, AGI, Audiencia de Guadalajara, 270.

49. Decreto del Presidente de la Real Audiencia, Mar. 15, 1785, BA, Reel 1.

50. Escrito de Gabriel de Vergara, Viseprefecto y Presidente de las Misiones de Coahuila de Queretaro, May 31, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3. In this document the missionaries argue for water on many grounds, including "a la propagación de la religión cristiana."

51. "... muy interesado en sus R^{os} Quintos. . . ." Petition of Diego de Quiros, Parral, June 24, 1674, AHP, Reel 1671A.

41. En la Villa de Santa Fe de la Nueva Mexico, en 30 de Julio de 1715 años, SANM, I, 8.

42. "Reglamento General de las Medidas de las Aguas," in Galván Rivera, *Ordenanzas de tierras y aguas*, p. 161.

43. Galván Rivera, *Ordenanzas de tierras y aguas*, pp. 95-96.

44. Petition of Felipe de la Cueva Montano, July 19, 1649, AHP, Reel 1653B.

government intent to develop this area, he buttressed his request with the caveat that, if the grant was made, "the royal roads will be protected and a large number of Indians will come to know the Catholic faith."⁵² Government intent having been properly anticipated, the grant was extended.

A sixth criterion was legal right, a phenomenon not well understood in Spanish colonial water law. To be sure, when water controversies were carried to the courts, the contending parties were asked to defend their legal rights with proper documentation.⁵³ But there was a variety of legal rights, and they did not weigh equally on the Spanish colonial and Mexican scales of justice. In its conceptualization of legal right, Spanish law first distinguished between municipal or corporate rights on the one hand and individual or private rights on the other. After independence, Mexican law did the same. The municipal tradition was strong in Spain prior to the conquest of America, even though some of it fell victim to the Crown's centralization of authority during the Reconquest. The local cabildos were given wide latitude in the distribution of water and in the resolution of water disputes.⁵⁴ In original distribution, the water needs of the town were to take precedence over those of individual colonists.⁵⁵ If a cabildo inadvertently awarded too much of the available water to individuals at the expense of the community as a whole, these individual water grants would be rescinded.⁵⁶ If a local governing body sought royal funding for a water project, it invariably included in its request the idea that the entire community needed the dam or the irrigation ditch.⁵⁷ There is no question that in the Spanish and Mexican judicial systems the

52. Petition of Andrés Lopez de Gracia, Parral Dec. 24, 1671, AHP, Reel 1671.

53. For example, "representar el dño que pertenía a dha misión con especialidad al oyo de agua mencionado. . . ." José Antonio Almazán, July 27, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

54. The municipal water tradition is developed in William B. Taylor, "Colonial Land and Water Rights of the New Mexico Pueblo Indians with Special Reference to the Teva Region" (unpublished manuscript for the case of *New Mexico vs. Hamoli*, 1979). See also Encinas, *Cedulario indiano*, I, 63, and Rafael Altamira y Crevea et al., *Contribuciones a la historia municipal de América*. (Mexico: Instituto Panamericano de Geografía e Historia, 1951). The fueros of medieval Cataluña, Navarra, and Granada all recognized the corporate preference to water and subjugated private rights. See written testimony of William B. Stern, "The Water Rights of the Pueblo of Los Angeles," in *Los Angeles vs. San Fernando*, p. B26.

55. Ynsuccion practica que handle observar los comisionados para el repartimiento de tierras. . . , Jan. 25, 1771, AGN, Historia, Vol. 16, Exp. 8.

56. Real Cédula de 18 de Noviembre de 1803, Rodríguez de San Miguel, *Pandectas*, II, 304.

57. Testimonio de Diligencias executadas en virtud de despacho del Sr. Don Tomas Vélez Capuchín. . . a fin de que se execute el arbitrio. . . para la preza y vocasequia de este Rio del Norte. . . Año de 1754, AIPC, PE-51.

rights of the corporate community weighed more heavily than those of the individual. As Betty Dobkins has stated: "To look at the Spanish [water] system through the lens of individualistic property concepts is to miss its *raison d'être*."⁵⁸ The principle is perhaps best symbolized in an 1832 water controversy in New Mexico. When a Mexican landowner in the vicinity of San Juan Pueblo asked for water rights, he was turned down by the governor because the pueblo's right as a community was stronger than his. The governor noted in his letterbook that "the common [right] of the pueblo is without doubt more deserving than that of a single man."⁵⁹

The water retained by the Spanish American town was held in trust for the benefit of the entire community. It was not the property of the inhabitants of that town, either individually or collectively, but rather was the property of the corporate body itself.⁶⁰ The judicial personality of that corporate body was vested in the cabildo, which held legal authority to make all judgments concerning local water usage. The community preference to water under Spanish colonial and Mexican law has figured prominently in the legal history of the United States and forms the basis of the so-called Pueblo Rights Doctrine. A series of California and New Mexico water decisions has held that "Mexican colonization pueblos should have a prior and paramount right to the use of so much of the water of streams or rivers flowing through or along or beside such pueblos as should be necessary for the use of such pueblos and their inhabitants. . . ." ⁶¹ The idea behind the Pueblos Rights Doctrine is sound, but its use in United States courts has been inappropriately rigid and absolute.

Spanish water law was far from simplistic. The issue of corporate or individual preference is one case in point. The water advantage that the corporate community enjoyed over the individual, on the basis of legal right, was by no means absolute. Spanish law also addressed the rights of the individual. As early as 1573, when King Phillip II issued his famous ordinances on the founding of new towns, he specified

58. Dobkins, *The Spanish Element in Texas Water Law*, p. 98.

59. Governor's Letterbooks to Alcaldes Constitucionales, May 8, 1832, MANM, Reel 14.

60. A. William Hall, *Irrigation Development* (Sacramento: California State Office, 1886), p. 368.

61. Robert Emmet Clark, "The Pueblo Rights Doctrine in New Mexico," *New Mexico Historical Review* 35 (October, 1960), p. 266. The article demonstrates that the California Pueblo Rights Doctrine was made applicable to New Mexico in the decision of *Carntonigh et al. vs. The Public Service Company of New Mexico* (66 N.M. 64 343P 2d 654, September 3, 1939). The decision was subsequently appealed by the plaintiff and upheld by the New Mexico Supreme Court.

ified that grants of land and water should be made in such a way as to result in no prejudice to existing Indian towns, existing Spanish towns, "nor to individual persons."⁶² It is instructive that the corporate rights of the community, whether it be Indian or Spanish, were not to infringe upon, much less invalidate, the rights of the individual. Two hundred years after the ordinances of Phillip II, the Plan de Pitec reaffirmed exactly the same principle. Article 2 of the Plan specifies that, when a new town is planned, its boundaries should not result in injury to established Indian towns or to individuals. The principle of individual rights is stated even more forcefully in Article 19, which admonishes water judges not to give anyone in the town more than his fair share in order to protect the rights of individuals not residing in the town.⁶³ A royal decree issued by King Ferdinand VII on the eve of Mexico's separation from Spain clearly protected individual rights to water, for it even authorized tax exemptions for both communities and individuals opening up new irrigation canals.⁶⁴ The protection of individual rights vis-à-vis those of the corporate community did not change with Mexican independence. In December of 1841, just a few years before war broke out between the United States and Mexico, Guadalupe Miranda was given a water grant in New Mexico. It specified that it was made without prejudice to either the common good or the individual good.⁶⁵

The concern of Spanish water law with individual rights can be traced in a number of disputes, but the principles are most clearly enunciated in an 1808 controversy between Andrés Felin y Fogones, dean of the church of Monterrey, and the cabildo of the same city. Fogones had inherited an orchard of ten solares with water rights from his predecessor at the church, Fray Rafael José Rengel. Rengel had purchased his water rights, had constructed the acequia madre with his own funds, and had planted the largest orchard in Monterrey. He had regularly donated trees to the city for its beautification and had allowed the city poor to have his sobrante water at no cost. After Rengel's death, Fogones continued the same policies, but the city decided to construct a new acequia madre, diverting the water before

it reached the existing ditch. The city claimed it needed the water as an income-producing source (*propios*) and planned to charge individuals ten to twelve pesos a day for its use. Fogones was furious. He charged the local government with committing a violently despotic act. He was giving water free to the poor, and the city now wanted to charge them.⁶⁶ Fogones' lawyer, José María Ortuño, made a strong case against the city: "They were taking water legally held by an individual, and in the process were prejudicing not only the owner but the many poor people to whom he allowed free use. "Who would have presumed, even remotely," he continued, "that water, a product of nature, common and necessary to all living things, would be converted into a saleable commercial product?" Worse, they planned to sell it to whomever could pay the most for it."⁶⁷ The city refused to budge, and the case eventually reached the Audiencia de Guadalajara. The high court found that Fogones' arguments had merit and ruled against the city: Individual rights to water could withstand unjustifiable corporate claims.⁶⁸

Spanish and Mexican protection of individual water rights should not be misinterpreted. The rights of the community were certainly guarded as well and, indeed, in some respects were held in preference, but the individual rights to water and land were not wantonly subjected to those of the corporate community.

The question of legal right presents one additional problem to the study of Spanish colonial water law. It derives from the issue of historicism. Most guides to historical method wisely admonish the researcher to resist the understandable temptation of superimposing the cultural values of one world upon another. If a country's history is to be understood on its own terms, cultural empathy must rest with the society being studied, not the society to which the scholar belongs. This principle is especially important to the study of institutional history and legal history, in which there is a strong and almost natural tendency to view the relationship of the individual and the state through the cultural prisms of a later age.

In many contemporary societies, if a dispute over water should occur, the fundamental question to be asked is: Who has legal right to the water? In the Spanish colonial legal system this was not the basic

62. "... que sea en parte a donde no pare perjuicio a cualesquier pueblos despañoles o de indios que antes estubieren poblados, ni de ninguna persona particular." "Ordinanzas de su Magestad hechas para los nuevos descubrimientos, conquistas y pacificaciones," in *Colección de documentos inéditos*, . . . , XVI, p. 167.

63. Plan de Pitec, AGN, Tierras, Vol. 2773; Exp. 22, and UT WBS 9.

64. Decreto 30 del Rey Don Fernando VII, August 31, 1819. Cited in Written Testimony of William B. Stern, *Los Angeles vs. San Fernando*, p. B45.

65. Report of the Water Commission, Santa Fe, Dec. 23, 1841, SANM, II, 629.

66. Dn. Andres Felin y Fogones to Governor, Feb. 4, 1808, AGN, Tierras, Vol. 1345, Exp. II.

67. José María Ortuño to Sor Fiscal de lo Civil, Mar. 1808, AGN, Tierras, Vol. 1395, Exp. II.

68. Audiencia to Ayuntamiento de Monterrey, May 9, 1808, AGN, Tierras, Vol. 1395, Exp. II.

question. It was an answer to a still more fundamental inquiry. Litigants in water disputes knew that the court might not decide the issue on the basis of legal right and tried to cover themselves by incorporating other arguments that would support their cases. When Juan Nepomuceno de Larralde found himself disputing water with his neighbor, José Miguel Losano, in Nuevo León, he told the judge specifically that, if the case was not decided on the basis of legal right, the court should consider the fact that Losano already had two water outlets and he had only one.⁶⁹

In the previously mentioned water case of *Santa Ana versus Angostara*, need was placed above legal right in the water distribution.⁷⁰ The identical principle was enunciated in an 1882 New Mexico water decision which declared that need was superior to all rights.⁷¹ The well-documented water dispute between the Canary Islanders who settled San Antonio and the five surrounding missions affords another example. The missionaries developed a strong and erudite judicial treatise, at proper times interspersing the text with Latin phrases (*conservatio et continuata productio*) and citing principles of Roman law, Spanish law, and specific legislation from the *Recopilación* in support of their legal right.⁷² The counterclaim of the settlers was much simpler. The king had asked them to come to New Spain and had promised them land and water. The commander of the presidio compromised, giving both sides some of the water, but in his decision took the occasion to indicate that, even if the Islanders could muster no laws in support of their legal right, they were still entitled to the water because the king had indeed ordered their migration.⁷³ But the clearest statement of the role of legal right in water distribution came in the New Mexico case of *Taos versus Arroyo Seco*. Even though the Indians of the pueblo of Taos had total right (*derecho total*) to the water, the Spanish settlers of Arroyo Seco were awarded a share in the repartimiento.⁷⁴

At least one other student of Spanish and Spanish American water practices has been troubled by our imperfect understanding of

legal right. Thomas Glick, after an extensive study of Spanish irrigation in medieval Valencia, turned his attention to the irrigation system of San Antonio, Texas. Among his provocative conclusions is the assertion that legal rights to water have been overstressed in the legal history. Glick argues persuasively that water practices, conditioned by local circumstances, are sometimes more important than legal rights themselves.

Water rights are a society's idealized assessment of the best way to utilize water resources, according to the objectives most highly valued by that society. There is a subtle interplay between rights and practice, between the ideal and the real, and there has been a tendency to overstress the importance of rights in the overall picture. . . . At best the legal structure provides a framework in which arrangements are worked out. If subsequent practice proves, however, that the idealized assessment of resource utilization was incorrect, or inappropriate to the situation, the rights are altered—often with resistance—to meet the exigencies of the environment.⁷⁵

Professor Glick's conclusion has much to recommend it. The documentary evidence from throughout the Southwest suggests strongly that, when a controversy over water surfaced, the underlying inquiry centered on the issue of how the water was to be divided. Who had the legal right was no more than one answer to this essential question. Judicial decision, in effect, came to the aid of custom. Legal rights, whether they be corporate or individual, did not constitute a single, overbearing consideration in the adjudication of water disputes.⁷⁶

A seventh criterion upon which water disputes were resolved was the doctrine of equity and the common good, extremely important theoretical principles in Spanish colonial and Mexican law. Spaniards, no less than others, appreciated that an envious jurisprudence should focus on the good of the whole. Because equity did not recognize ethnicity and made no distinctions between wealth and poverty, it was the major goal of the administrative system established in the *New World*.⁷⁷ After hearing all of the evidence and, in some cases, receiving the reports of independent experts, the judge charged with mak-

69. Larralde to Gobernador Vidal de Lorcea, 1, 1778, AGN, Tierras, Vol. 1018, Exp. 3.
70. Salvador Montoya to Alcalde de Santa Ana, García Montoya, Aug. 1, 1888, UNM SC.
71. Manuel Martínez to Jefe Político, July 3, 1832, MANM, Reel 15.
72. Escríptulo de Gabriel Veyraza, Vicespекtor y Preside^o de las misiones de Co Sa Crus de Queretaro, May 31, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

73. "Y quando no huvere ley . . . que los favorezca en esta parte sera muy bastante la Real Cédula en la que mande Su Magest saliesen de sus tierras para que poblasen las de aquella provincia," Pedro de Rivera to Viceroy, Dec. 1, 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

74. Juan Ant^o Lobato, Oct. 30, 1823, SANM, 1, 1292.

75. Thomas Glick, *The Old World Background to the Irrigation System of San Antonio, Texas* (El Paso: Texas Western University Press, 1972), pp. 50–51.

76. The *Recopilación* itself provided an important role for local custom in water allocations. See, for example, Libro II, Título 1, Ley 4, and Libro IV, Título 17, Ley 11.
77. See, for example, Mario Góngora, *Studies in the Colonial History of America* (Cambridge: Cambridge University Press, 1975), p. 72.

ing a water determination would ask himself what was equitable for the litigants, what was equitable for other individuals, and what was equitable for the larger community, *el bien y pro comun*.⁷⁸ He would concern himself not only with the question of who stands to gain what, but, more importantly, with the question of who stands to lose what. Ultimately, he would resolve the case with some form of compromise, a solution that seldom pleased anyone, but, more significantly, did not cause irreparable damage to anyone.

The common good was not necessarily synonymous with the water preference of the corporate community over the individual. The latter was a narrowly conceived legal concept; the former a broad principle much akin to what later became known as the Benthamite doctrine of the greatest good for the greatest number. An individual serving the common good with his water source could defeat even the corporate community in water litigation if that community was shirking its responsibility to the citizenry.⁷⁹ Although the corporate right of the community was generally weighted more heavily than the right of the individual, it did not follow that the corporate right was held in higher esteem than an aggregate of individual rights if, for example, the nonincorporated population using a water source approximated or even outnumbered the population of the corporate community. Spanish and Indian pueblos in northwestern New Spain were often small, and it was not unusual for the surrounding population to outnumber the population of the town itself. In addition, two corporate communities or two unincorporated populations could dispute water. In instances such as these, as well as many others, the doctrine of equity and the common good would assume an important role.

The relationship between equity and the common good is clear in the documentation. Equity is the means, and the common good the end. Water judges were constantly reminded that only through equity could they promote the happiness of the community and the common good.⁸⁰ In 1768, for example, the governor of New Mexico instructed the alcalde mayor of Santa Fe that, in a pending allocation of waters, he should divide the resource "with equity."⁸¹ Some forty-six years

78. *Notísima recopilación*, Libro VI, Título 24, Ley 1.

79. This was one of the issues resolved in the case of *Fogones vs. Monterrey* cited above. See Expediente Promovido por el Dn Andrés Feju y Fogones . . . sobre que los Regidores de Aquella ciudad impiden de su uso del agua . . . AGN, Tierras, Vol. 1395, Exp. II.

80. ". . . el aumento y felicidad de los pueblos. . ." Instrucciones que deberan guardar las Justicias subalternas, May 21, 1786, AHP, Reel 1787A.

81. Governor Don Pedro Fermín de Mendinueta, Mar. 12, 1768, SANM, II, 637. The commander of the presidio of Alzar gave exactly the same instruction to his water judges. Caballero de Croix to don Joseph Galvez, Dec. 23, 1780, AGI, Audiencia de Guadaluajara, 272.

later another New Mexico governor ordered the alcalde mayor of Taos to settle a complicated water dispute by combining "equity and justice."⁸² The Plan de Pitec based its entire water distribution formula on the principles of "equity and justice."⁸³ It is clear from the juxtaposition of these two phrases in a number of documents that a distinction is made between justice, which is a legal principle, and equity, which is an ethical assertion. A water distribution could be just (satisfying all legal requirements) without being equitable (promoting the common good). As William Stern stated in his expert testimony in the water controversy between the cities of Los Angeles and San Fernando, the litigation of water disputes under Spanish law concerned itself more with "doing the best for the common good" than it did with the explanation of the law itself.⁸⁴

In actual decisions, judges were at pains to indicate to their superiors that their verdicts had been rendered with the common good in mind. In the water repartimiento of Nicolás Ortiz the judge indicated with some redundancy that his decision had been conditioned in part by "the common good of everyone."⁸⁵ When the Santa Fe Water Commission made a grant to Guadalupe Miranda, one of the reasons specified was that, because he helped travelers with water and supplies, the grant would be "in the common good."⁸⁶ Other examples abound. The water judges of northern New Spain were not convinced that an aggregate of unbridled individual ambitions would produce a harmonious society.

The doctrine of equity and the common good encompassed lofty and perhaps unattainable ethical goals. But those judges who proclaimed the doctrine with enthusiasm in their decisions were doing more than genuflecting toward a utopia or paying lip-service to a vague and meaningless notion. As it established itself as a working principle of Spanish law, the doctrine provided the moral mechanism for bridging the gap between the self-interest of individuals and the larger interest of society. It mitigated against any attempted water monopoly and provided one of the few avenues for a more contemplative kind of justice. Incapable of categorical definition, it also gave judicial officials tremendous flexibility in rendering decisions. The

82. Decree of Governor Alberto Maynez, Santa Fe, Apr. 15, 1815, SANM, I, 1357.

83. Plan de Pitec, Article 20, AGN, Tierras, Vol. 2773, Exp. 22.

84. Stern, "The Water Rights of the Pueblo of Los Angeles," in *Los Angeles vs. San Fernando*, 327.

85. ". . . en el bien comun de todos." Auto de cabeza de causa criminal contra el Capñ Nicolás Ortiz, July 13, 1723, SANM, II, 317A.

86. ". . . por el bien procuramunal." Report of the Water Commission, Santa Fe, Dec. 23, 1841, SANM, II, 629.

geographic isolation of the north and inadequacy of transportation and communication made it unusual to seek advice in Guadalajara or Mexico City. Because decisions had to be made locally, flexibility was extremely important. Certainly the same flexibility left ample room for abuse, but it also provided a basis for discretionary judgment when local conditions seemed to dictate that title, legal right, or prior use should be subordinated to more immediate environmental exigencies. A legal right was firmly etched, but the common good could change with the passage of time. In short, the doctrine facilitated the matching of water allocations and water need as it made the Spanish struggle for justice less wooden and mechanical.



As part of Spain's colonizing endeavor in the New World, the Hispanic Southwest exhibited many characteristics common to the entire empire. But this frontier region was not merely a mirror of Spanish undertakings elsewhere; it emerged with a unique historical experience. The natural environment dictated that water would exert an influence unusual in the Spanish-speaking world. The availability or scarcity of water determined man-land relationships, conditioned patterns of human adaptation, helped define sexual and clan roles within certain groups, molded the nature of ethnic interactions, and even bequeathed a special kind of value system. Politically, economically, religiously, and militarily, water was a crucial ingredient in the historical potpourri which helped differentiate the Mexican north from other areas of New Spain.

Prior to the initial Spanish contact, Indian tribes in the northern desert appreciated that the manipulation of water could help free them from privation but, by subjecting them to more stringent measures of social control, could enslave them nevertheless. Most of those Indians who had resisted the temptations of becoming sedentary agriculturalists prior to the arrival of the Spaniards gradually succumbed to a war of attrition in the eighteenth and nineteenth centuries. History soon vindicated their fear that social control would lead to social abuse. The scenario was played out on a grand scale in the centuries following the initial Spanish settlement of the north.

The Spanish conquest of the northern frontier followed patterns not unfamiliar to students of sixteenth-century Spanish America, but the system of post-conquest control was more novel than in other parts of the empire. It did not take long for the conquerors, soldiers, missionaries, and colonists to realize that dominion over water not only meant control of the land it washed, but, more importantly, domina-

tion of those who resided on it. The Spanish motivations ranged across a broad spectrum, from personal aggrandizement and the desire for power to the more benevolent spiritual concerns of the clergy. But in all of these cases domination of the native population was the goal, and manipulation of water an important weapon to be employed. Had water not been so crucial in controlling the Indians, the Spaniards undoubtedly would have disputed water among themselves, because it was both necessary and scarce. But Spanish competition for water had an added incentive. Clergy, soldiers, and individual colonists could not easily control the Indian population for their own purposes if their Spanish neighbors monopolized the nearest water source. The contests for water were thus heated, whether they pitted Spaniard against Spaniard or Spaniard against Indian.

Had the Mexican north been an area of great material wealth or the home of large concentrations of Indians, officials in Mexico City, stimulated by the prospects of gain, would have taken greater interest in it. But great distance from the center of power and general apathy combined to insulate the region. Local and provincial officials both before and after Mexican independence, by default enjoyed wide latitude of action. Municipal water ordinances seldom were ratified by higher authority and, unless they were egregious in disregard of general legal norms, seldom were denied ratification. They remained in full force at the pleasure of the local elites. In the provincial capitals of the north an active governor could serve as a counterbalance to the *cabildo*, but in most towns the *cabildo's* word was law and seldom challenged with success.

In a system of exaggerated local control, abuse in water allocation was constant, and when it became intolerable the judicial mechanisms of the state were called into place. The kinds of water disputes which both Spaniards and Indians carried to the courts of northern New Spain are an excellent reflection of the society in which they lived, and the judicial doctrines upon which they were to be resolved an eloquent statement of the goals envisioned for a just society. The actual decisions reached reveal much about the local power structure in the colonial period and early nineteenth century.

It is true that Spanish officials seemed more devoted to the letter of the law than to its application, especially when it threatened to work against the best interest of the local elites. But what is surprising about the adjudication of water conflicts is that the elites did not exert more influence than they actually did. To be sure, influence helped. The wealthy and the powerful won more cases than they lost and in the process often trampled on the rights of others. Local officials could be bribed, and they sometimes were. Networks of family ties and

compadrazco could suborn the safeguards of the judicial system, and sometimes they did. But there are enough examples of Indians, mestizos, and poor Spaniards coming out of the courts with more water than when they entered to conclude that the voluminous legislation designed to protect the interests of the disadvantaged, both before and after Mexican independence, was not completely in vain. Compromise and concern for the common good were not merely lofty goals rejected cavalierly in the courts of the Hispanic Southwest. They were not simply guises making possible the cohabitation of the judge with his conscience. They were fundamental principles brought to bear even in the most complex of water adjudications and even when the status of one of the litigants would have suggested that his opponent stood no chance in the impending case.

Less obvious than those heated contests which pitted man against his fellow man were those struggles between man and his environment. Few appreciated that innocent tampering with the delicate desert ecosystem, especially with its natural water reserve, might portend fundamental, permanent change. Legal restrictions on the use of water were defined largely in an ecological vacuum. Admirable in their concern for equitable distribution, only occasionally did they address the need for conservation. The price to be paid for demanding a quick profit from the earth's resources was never imagined, much less assessed. The short-term benefits of eculturation often yielded to long-term liabilities which could manifest themselves either suddenly and violently or subtly and gradually. While floods certainly antedated the arrival of man in the Southwest, to natural occurrences were added the inevitable retributions to thoughtless manipulation. The aftermath of flooding provided only the most graphic illustrations of the permanent impact of eculturation. In countless other ways the desert land did not remain indifferent to its exploitation.

For three centuries, from roughly 1550 to 1850, water exerted an amazingly constant influence in the Mexican north. Spanish settlement, with its attendant demographic and economic shifts, exacerbated water scarcity, but, once this new reality came to dominate the life cycle of northerners, the water history of the region underwent few dramatic changes. The major alterations in the religious organization (the expulsion of the Jesuits) and political structure (the organization of the Provincias Internas and subsequently Mexican independence from Spain) made little difference. The economic dislocation and human suffering caused by a drought or a flood, or the opportunity afforded a poor Indian to redress a water grievance in the courts, were about the same in the middle of the nineteenth century as they had been in the middle of the sixteenth.

The continuities of water history in the north were, of course, determined in part by cycles of precipitation. Interethnic tensions rose during dry years and lessened during wet ones. But not all the continuities were predetermined or inevitable. If eighteenth- and nineteenth-century settlers had learned irrefutable water lessons from earlier generations of colonists, such as the consequences of constructing buildings in the floodplain of an arroyo, basic changes in social patterns would have emerged with the passage of time, and these, in turn, could have lent themselves to the formulation of a new periodization. But this type of change did not occur. Later settlers in the north, for better or for worse, were prisoners not of history but of certain cultural predispositions. The lure of constructing buildings under the shade of trees found in the floodplain was more seductive than the lessons of dozens of previous villages being destroyed by floods. These eighteenth- and nineteenth-century settlers not only refused to accept the lessons of precedent, but remained impervious to the laws of nature.

The struggle for water in the Hispanic Southwest was above all a microcosm of the entire spectrum of competing human values. While the native American populations of the desert viewed the precious liquid as the medium of life, the conquerors, missionaries, and settlers viewed it as an instrument of control, a source of power, and most importantly as the fount of accumulated wealth. Even in the aftermath of the physical subjugation of the Indian there was only a mixing, never a blending, of ideas concerning the accommodation man ultimately must make with the earth's natural bounty.