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NMHR 19 April 1944): 135–67; Adams and Keith W. Algier, "A Frontier Book List 1800," *NMHR* 43 (January 1968): 49–58; and Richard E. Greenleaf, "The Inquisition in Spanish Louisiana, 1762–1800," *NMHR* 49 (January 1975): 56–58, 71, for the book trade on the eastern flank of the New Mexico colony.

64. AGN, Inquisición, vol. 1353, exp. 13.

65. Chávez, *Archives*, p. 79.

Seal of the Mexican Inquisition.

THE LEGAL RELATIONSHIP OF LAND TO WATER IN NORTHERN MEXICO AND THE HISPANIC SOUTHWEST

MICHAEL C. MEYER

IN SPITE of some significant recent breakthroughs, Spanish American water historiography finds itself in a state of infancy. Although the historiography of land tenure is undeniably rich, relatively little is known about the historical relationship of land to water anywhere in Spain's huge American empire.[1] Northern Mexico and the Hispanic Southwest offer an excellent laboratory for examining this complex relationship because the pervading aridity of the area placed a premium on water acquisition and water allocation. In both cases domain over water was defined largely in relationship to domain over land.

When the Spaniards arrived in central Mexico in the early sixteenth century they did not immediately begin to seize large amounts of Indian land. In the 1520s, 1530s, and 1540s, Mexico held out promises of quick wealth more lucrative than land: native treasure, mining production, and Indian labor. But in the second half of the sixteenth century the situation changed. The original booty was gone, and the catastrophic decline in native population left previously occupied lands vacant and reduced the potential revenues to be derived from Indian labor. The acquisition of land, therefore, assumed a new importance, and the conquerors availed themselves of various means, legal and illegal, of securing control. The crassest method was simply usurpation—the forceful take-over of native property. In most cases, however, legal niceties were followed, and the land was acquired by purchase or grant, an action sometimes preceded by the resettlement of Indians into *congregaciones*. These new communities of Indians were initiated theoretically to facilitate

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their conversion, but they were significant in land acquisition history because the lands previously occupied by the groups, often very good lands with a ready water supply, were left vacant and became *realengos* (royal lands) or *baldíos* (vacant or public lands).

As early as 1523 Hernán Cortés, as governor of New Spain, was given the right to make land grants to deserving colonists. Not long afterward, others, including the audiencia, viceroys, various governors, and alcaldes mayores, held the same right. Even newly established communities were empowered to make land grants to the recently arrived and to the already established citizens who wanted more. By the late eighteenth century, individual presidio commanders in the Southwest were authorized to make grants of land.[2] Once all of the legal provisions of the land grant were met, it could be revoked only in the most unusual of circumstances. The land was private property to be passed on to the legal heirs of the grantee.[3]

Theoretically there were two types of land grants (*mercedes*): *peonías* (approximately twenty acres or the amount that a man could be expected to work in one day) for the conquering foot soldiers, and *caballerías* (approximately one hundred and five acres) for the noblemen.[4] In practice, however, because land seemed so plentiful and few Spanish settlers considered themselves less than noble, the peonía was rarely used in New Spain. By the middle of the sixteenth century, the most common pattern that emerged was for an individual to be granted a *vecindad*, which consisted generally of a lot upon which to build a house, a garden area, two or three caballerías of harvest land, and some pasture land.[5] A common feature in many grants was the proviso that the land should be cultivated within a year and should not be allowed to lie fallow for more than four consecutive years. Flagrant violation could prompt revocation of the grant, but seldom did this occur.

The early Spanish land grants in Mexico did not automatically convey water rights. This fact did not prevent the owners from irrigating their land. They did so illegally, however, realizing that if their water use was questioned, they could later acquire water rights by grant, purchase, or various other legal procedures.[6] In the early post-conquest period, for example, thirty-two settlers at Celaya were awarded vecindades. Later, water for irrigation was

added to their grants.[7] This situation was not unique, although sometimes many years passed before water rights were added. On other occasions they were never added.

The reasons for not automatically extending water rights with land grants reflected long-established Iberian water traditions. Water had to be carefully regulated in the interest of the entire community. Land grants in medieval Spain were made granting irrigation rights (*terre in regadivo*) or withholding them (*terre in sequano*).[8] The *Siete Partidas*, the famous thirteenth-century codification of Spanish law ordered by King Alfonso X, stated that the water was the thing man could least do without. Therefore, following the principles set forth in the Code of Justinian, it could be used in common by all persons for certain purposes: drinking, bathing, navigation, docking and repairing of boats, and unloading of merchandise. No special permission was needed for these activities. Significantly, water for irrigation or for harnessing its motive energy for industrial purposes was not included in the category of common use of water.[9] The *Siete Partidas* did address the question of irrigation, as the issue was of major significance in arid Iberia. But water in large amounts, such as for irrigation or for powering mills, could not be treated as any other water "because it would not be wise that the benefit of all men be hindered by the interest of some individuals."[10] The same distinction between kinds of water was made in New Spain. Domingo Lasso de la Vega's water regulations, issued in 1761, were clear:

> because all public rivers are, as a matter of fact, for public and common use, it should not be presumed that they are public and common with regard to their flow; they can be used publicly only for personal domestic needs.[11]

Extending or withholding any water rights in a land grant was generally a calculated decision. Water use was defined in relationship to land classification, and there were many different classifications of land. At the time of its discovery of the New World, the Spanish Crown declared its ownership of all the land in the Indies. Book 3, Title 1, Law 1 of the *Recopilación* of 1680 states:

> we are Lords of the West Indies, Islands and Tierra Firme of the

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> Ocean Sea, discovered and to be discovered, and these are incorporated in our Royal Crown of Castile. And because it is our will and because we have promised and judged it fitting these lands shall always remain united for their maximum perpetuity and strength we prohibit their alienation.[12]

Jurist Juan de Solórzano Pereïra stated the same phenomenon even more clearly in his classic seventeenth-century study, *Política indiana:*

> Except for the lands, meadows, pastures, woodlands and waters that by particular concession and grant have been made . . . all the rest of this land, and especially that which is yet to be plowed and cultivated, is and should be of the Royal Crown and Dominion.[13]

Land, water, and mineral wealth were all part of the royal patrimony and could be alienated from Crown ownership only by the Crown itself or by properly designated authority. If the royal patrimony were not alienated or privatized in some way, it was considered to be for the benefit of all. Book 4, Title 17, Law 5 of the *Recopilación* speaks to this point:

> We have ordered that the pastures, woodlands, and waters shall be held in common in the Indies . . . and this shall be observed wherever there shall be no title or authority from ourselves by which a different disposition be made.[14]

Generally consistent with the *Siete Partidas,* water on Crown lands in New Spain could be used for certain purposes by the public for drinking, bathing, recreation, and even for watering domesticated animals. Spanish citizens were well aware that no special permission was needed for these domestic uses, and in their correspondence they made the proper distinctions between irrigation water and common or domestic water.[15] But water law in northern New Spain was not an exact replica of the system defined centuries earlier in the mother country. Adaptation to a different reality placed new restrictions even on the use of common water. In Spain anyone could fish in public waters, but in eighteenth-century Texas special permission was needed.[16] Similar restrictions were placed

free navigation of rivers. Persons in early nineteenth-century who wanted to initiate a canoe charter service on several rivers found out that they, too, required special authorization.[17]

There were no riparian rights for agricultural or industrial uses in New Spain. The grant of a piece of land fronting on a river entitled the owner, without additional authorization, to use the water for domestic purposes, but for nothing else. The water was still royal patrimony to be disposed of at the discretion of the Crown or its designated authorities. The only automatic alienation of water with a land grant was for water that originated on the piece of land. A spring or a well became the property of the owners of the land where it rose, a tradition deeply engrained in medieval Spanish water law.[18] The distinct ownership pattern between surface and subsurface water is not easy to explain. Water originating from rain was considered common property,[19] but knowledge of aquifers was very rudimentary. Maybe the water in springs and wells came from subterranean sources; maybe it had just always been there; the supply certainly seemed limitless.[20] There was little or no appreciation that underground water also originated from precipitation, or that depleting an underground reserve on a given piece of property could have a direct impact on the water supply of a neighbor. Given this imperfect understanding, a person could pump water from a well or channel spring water to his fields without special permission. The only limitation on the use of water originating on private property was that it could not be used maliciously simply to deny its access to a neighbor.[21]

It was not common for water disputes to emerge on Crown land because the concept of royal patrimony was well understood. Water conflict was much more recurrent on land that was held by a community or by private individuals. Land could be alienated from Crown to community ownership in various ways and in different degrees of privatization. Some realengos were simply deeded to new towns in the founding document of the new community. These lands passed from Crown ownership to communal ownership as they became *tierras concegiles,* administered by the local governing body for the pueblo as a whole. Part of the tierras concegiles was retained for the future growth of the community, and part of

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it was privatized as it passed legally into the hands of individual settlers. The water on land held by the community, as water on royal land, was for communal use and was administered by the cabildo, which exercised the corporate right. It could be used for domestic purposes and, at least on some occasions, to irrigate a farm plot held by the town in common.[22] Individuals, however, could not use this common water to irrigate their private fields. The *Recopilación* provided for a fine of 5,000 pesos of gold for persons who used Crown water or common water for their personal gain.[23] When Domingo Lasso de la Vega prepared his detailed *General Regulation for the Measurement of Water*, he believed it necessary to reiterate that "no one without permission of the prince can conduct public waters to his lands for irrigation, especially in this New Spain."[24] This extremely important provision was enforced throughout northern New Spain, and there are examples of fines and arrests for those who broke the law.[25]

The Spanish legal system provided different classifications of private land ownership. Cattle ranchers, for example, could receive a merced for a *sitio de ganado major* (approximately 4,338 acres), or sheep raisers a *sitio de ganado menor* (approximately 1,928 acres), but generally only a small percentage (a few caballerías of 105 acres each) would be designated as *labores* or *labranzas* (small agricultural plots).[26] There are examples of grazing grants permitting the owner to irrigate as much of the land as the available water permitted, but these cases are extremely rare and probably reflect inordinate influence on the part of the petitioner.[27] More common is the huge grant made to Joseph Eugenio de la Garza Falcón in Coahuila in 1734. Garza Falcón was awarded 113 sitios de ganado major (490,194 acres), but only eight caballerías (840 acres)—a miniscule percentage—carried water rights.[28] The Jesuit hacienda of Tabaloapa in Chihuahua embraced fourteen and three-quarters sitios (almost 64,000 acres), but only six caballerías (630 acres), or less than one percent, were cropland.[29] Smaller grazing grants permitted a slightly higher percentage of the land to be irrigated, but seldom did this right exceed five to ten percent of the total acreage. The same general criteria applied to the large communal grants, whether they were Spanish towns or Indian pueblos. For example, when the Tlaxcalan Indians were given land and water

for the new community of San Estéban de la Nueva Tlaxcala in the district of Saltillo, they received three square leagues of land (13,014 acres) of which twenty caballerías (2,100 acres) were designated as labores.[30] This was an unusually generous grant of irrigated cropland and no doubt reflects the favorable position that the Tlaxcalans enjoyed throughout the colonial period because of their assistance to the Spaniards during the conquest and subsequent pacification of New Spain.[31] The more common pattern was for a pueblo in the north to receive about one to four square leagues with five or fewer caballerías designated as labores.

In making land grants and determining water usage, distinctions were made on the nature of the request and the land usage intent of the granting agency. The *Recopilación*, in law after law, is very clear on the distinct classification of land. For example, Book 4, Title 7, Law 14 distinguishes between *tierras de pasto* (pasture) and *labor* (cropland); Book 4, Title 12, Law 8 distinguishes between *tierras* (lands) and *tierras para ingenios* (land for mills); Book 4, Title 12, Law 13 makes a distinction between *tierras que hiviere de regadio* (irrigation land) and *tierras de ganados* (cattle land). Differing land classifications are perhaps the most apparent in Book 4, Title 3, Law 8, which stipulates that when towns are founded they should have water, land, and cropland. If these land distinctions were made only in the *Recopilación* or in other royal statutes, one could question their validity as operative principles. But the same distinctions appear repeatedly in grants of land and in the resolution of specific disputes throughout northern New Spain. A few examples will suffice.

A water dispute of 1649 pitted the Indians of Santa Cruz del Río Nazas (in present-day Durango) against the owner of a neighboring cattle hacienda. The details of that case are not of great importance here, but the settlement made clear distinctions between land and irrigation land.[32] The land grant made to Sandía Pueblo in New Mexico in 1747 distinguished between land and cropland.[33] A land inheritance case in the upper Río Grande valley of New Mexico in 1772 made the necessary distinction between cropland and unplowed land.[34] The land grant to the Canary Islanders who settled San Antonio, Texas, was equally clear that some of the grant was for tierras de regadío and some for tierras de pasto.[35]

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The different classifications of land ownership are extremely important to Spanish colonial water law because some of them carried water privileges while others did not. The grants of a sitio de ganado mayor or a sitio ganado menor did not carry water rights for irrigation or industrial purposes. The same is true for smaller grazing grants or *tierras de agostadero*. When Bartolomé Lobato asked for a grant of grazing land in 1714, he requested that water rights be included with it.[36] He was awarded the grant, but the water was to remain common water.[37] In most cases, those requesting grazing land knew that they could not receive water rights with it and asked for the land only for the purposes of grazing their herds.[38] The grants themselves, on occasion, specified that water rights were not included. The grant of 1768 from New Mexico Governor Pedro Fermín de Mendinueta to Baltasar Baca, for example, read in part, "and this grant I do make to father and son in equal shares, for them and their successors, for the pasturage of their herds of stock, and not in any case for planting. . . ."[39] The more common pattern, however, was for the grant to indicate simply that it was made for the purpose of grazing.[40] No mention of planting or irrigation water is made, and therefore no water rights can be properly implied. Grants of a sitio de ganado mayor or de ganado menor did often specify that watering holes (*aguajes*) for the cattle, horses, mules, or sheep were included within the grant. When Mariano de la Riva was awarded a sitio de ganado mayor in Baja California in 1769, his grant read that he had been awarded a square league "so that he and his successors would possess and enjoy it with all of its pastures, watering holes, paths, entrances, and exits."[41] The phraseology was the same in the Baja California grazing grant made to Cristóbal Geraldo the following year,[42] and similar phrases appear in grazing grants authorized elsewhere in northern New Spain.[43] The inclusion of watering holes was simply a formality because Spanish law provided that animals could be watered without special permission in common water. Some grazing grants did not specify that they included watering holes,[44] but this oversight did not result in controversy. The law was clear.

The question of water rights on grants of farmland is not so easily resolved. Many farm grants were made with a provision that they carried with them the water necessary for their cultivation. The

land grants made to the founders of San Antonio, Texas, for example, specified that "within the limits of their suerte . . . they will enjoy the benefits of the waters from the . . . Arroyo and the Río San Antonio."[45]

Those persons most knowledgeable about the Spanish legal system specifically requested that water rights be extended with their farmland. When Joseph Ramón de Noriega requested a land grant in Baja California in 1770, he asked that irrigation rights be extended with it.[46] Similarly, in 1671 Juan González, a citizen of Saltillo, asked for two caballerías of land and specified that he be granted "the merced including the water contained on that land."[47] In early nineteenth-century Texas, José Antonio Saucedo asked that favorable action be taken on "the land and water" he asked for in his petition,[48] and José Manuel Granados asked that he be awarded "two days' water right" with his land grant.[49] Others specifically asked that grants of water be added to their farming grants. If all necessary requirements were met, the requests would be honored.[50]

The problem to be addressed, however, is that in innumerable cases, water is not mentioned in the grant of farmland, nor is it subsequently added by other kind of legislative or judicial action. In her study of Spanish water law in Texas, Betty Dobkins argues against an implied right: "Spanish law did not simply assume that waters were granted with the land."[51] But others disagree. In his examination of several thousand land grants made in central and southern Mexico during the second half of the sixteenth and early seventeenth centuries, William Taylor found that the majority of them did not contain explicit water provisions. Because of this fact and other information, Taylor concluded that "land ownership carried with it an implied right to available water."[52] The question of implied water rights has never been thoroughly studied but is fundamental to understanding the water allocation system both before and after Mexican independence. This writer's reading of the documentation suggests that there is merit in Professor Taylor's hypothesis concerning the implied right, but his cautious argument requires some qualification. Certainly there was no implied right to water in the grazing grants, the sitios de ganado mayor, de ganado menor, and tierras de agostadero. Equally certain is that in the

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grants made to a community (either Spanish or Indian), some of the land was designated as pasture land and some as woodland. There was no implied grant of water for these lands. Even the case of farmland must be qualified.

The Spanish legal system recognized at least three kinds of farmland: *tierras de pan sembrar; tierras de pan coger;* and *tierras de pan llevar.* The first classification causes no definitional problem: tierras de pan sembrar were clearly designated for dryland farming. On occasion they are also labeled as *tierras de trigo de aventurero.* As the phrase itself suggests, only the most adventurous would bother to plant on them. These farmlands carried no water right.[53]

Tierras de pan coger, more commonly called *tierras de temporal* in the documentation for northern New Spain, have precipitated much legal debate, as they have been defined in different ways. Virtually all scholars agree that these lands are dependent upon the rainy season (the *temporal*) for their water source. But their legal susceptibility to irrigation has caused controversy. Some legal historians have defined them as "not irrigable," others as "not requiring irrigation," and still others (perhaps misinterpreting the word temporal) as "temporarily irrigable."[54] Although the documentation is far from clear on this matter, the evidence at least suggests strongly that they are not legally irrigable. This writer has seen no land grants that indicate that they are intended to be irrigated, and at least some land grants imply strongly that they are not irrigable. In 1768, for example, Salvador de Castro was awarded two suertes of land, one of them designated as *de riego,* or irrigated land, and the other as *de temporal.*[55] If tierras de temporal were intended to be irrigated, the distinction in the grant would have been meaningless.[56] Similarly, a Texas document of 1824 describing José de Sandoval's land and water rights states that "in addition he also held temporal land."[57] The issue is more clearly addressed in the Plan de Pitic, the founding document for Hermosillo, Sonora, with expressed applicability for the entire northern frontier of New Spain. Article 13 of the plan states that tierras de temporal "do not enjoy the benefit" of the acequia.[58]

The most authoritative source on land and water classifications, Manuel Galván Rivera, specifies only tierras de pan llevar as irrigable.[59] Nothing in the *Recopilación,* subsequent ordinances, judicial decisions, or land grants leads one to believe that Galván Rivera

was incorrect. Although tierra de pan llevar has sometimes been defined as wheatland, it is more properly defined as irrigable land.[60] The first constitutional legislature of the state of Chihuahua, enacting ordinances for the new political entity, agreed with Galván Rivera and defined only tierra de pan llevar as irrigable.[61]

Of the three major classifications of cropland, it is safe to assume that the implied water right can be extended only to tierras de pan llevar.[62] When Manuel Castillo asked the governor of Texas for "un terreno de pan llevar,"[63] he was asking for both land and water. If he was granted a piece of tierra de pan llevar, even if water was not specified, the implication is strong that he was granted the water that went with it.

Although this refinement of the implied right to water helps in some cases, in numerous others it does not, as none of the three legal classifications of cropland is mentioned, nor is water specified. In many small grants the land awarded is classified as suertes or as labores (or labranzas). The suerte, a garden plot, was theoretically equal to one-fourth of a caballería, or about twenty-six acres.[64] In practice, many were smaller, and at least some were larger. The labor was generally a small agricultural plot (one or two caballerías or between 105 or 210 acres). The actual size varied from time to time and from place to place. As a general rule, they were larger in the north than in central and southern Mexico. The kind of population pressure so prevalent in many areas of the south did not apply to the north, and northern aridity dictated more generous allotments.

Land grants made in suertes did not necessarily carry water rights.[65] When Gerónimo Chino, a resident of Baja California, asked for three suertes, he was awarded them, but his grant specified that only one of them carried water rights (*suerte de regadío*) while two of them did not (*suertes de temporal*).[66] Similarly, Felipe Romero received two suertes with water rights and two without,[67] and José Antonio Munguía received two suertes, both without water rights.[68] A similar distinction in types of suertes is found in the Sonora and New Mexico documentation as well, before and after Mexican independence. When Antonio de los Reyes, bishop of Sonora, developed a plan to improve the missions of the region in 1774, he suggested that the Indians each be given two suertes of land, one with irrigation water and one without.[69] In the 1830s,

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New Mexico settlers were awarded suertes on the San Joaquín grant; one-third of them carried water rights, and two-thirds of them did not.[70] In those many cases in which suertes were awarded without mention of water, the case for implied rights is very weak unless there is independent indication in the documentation that the land in question is intended to be irrigated. On occasion, part of the suerte is designated as a *huerta,* or family garden. The huerta, by definition, was an irrigated plot and therefore carried water rights.[71] The remaining portion of the suerte could not be irrigated unless the water right was extended in some way.

The case for implied water in grants specified as labores or labranzas is much stronger.[72] In his study of ranching in colonial Mexico, William H. Dusenberry concluded that labores always included water rights.[73] Although the statement may be too absolute, a strong case can be made in its support. The labor was designed for very intensive agriculture and for orchards needed to feed the local nonagrarian population. In addition the labor was expected to provide excess agricultural production for missions and for Indian communities. A surplus could not be produced in the arid north without access to water. Furthermore, the juxtaposition in the legislation of labores or labranzas with the need for intensive agriculture provides additional circumstantial evidence for the implied water right.[74] When Juana Benavides in New Mexico asked the alcalde mayor to confirm her right to her dead son's land, "unas de lavor y otras hiriaza," she was claiming the part of his land that carried water rights.[75] When the Canary Islanders of San Antonio found themselves disputing water with neighboring missions, they pleaded that, when Viceroy Marqués de Casafuerte made them grants of tierra de labor, he was granting them the right to two water sources (*dos ojos de aguas*) as well.[76] Their claim was ultimately sustained.[77] When the Jesuit hacienda of Tabaloapa was surveyed and appraised for sale after the expulsion of the Jesuits, the phrases *caballerías de labor* and *de pan llevar* seem to have been used synonymously.[78] There are occasions when a labor or part of a labor is made without water rights,[79] but the case for implied water rights, in the absence of specific denial, is strong.

The location of land on a water source was an important consideration in water usage. Downstream landowners on a natural water

course (a river or a stream), if they held water rights, were protected against damming or diversion by their upstream neighbors. But downstream owners on an artificially constructed water course (an irrigation ditch or canal) did not have water rights unless they were specified in formal agreement with the upstream users. For example, if a farmer or group of farmers tied into the lower end of a ditch constructed by others, they had no legal right to passage of the water unless the upstream owners extended that right.[80] Except in cases of extremely bad relations between neighbors, right to such usage was commonly granted. If it were not, the downstream users were entitled to build their own acequia across their neighbors' land or even place a dam on it, and in the process deny them important crop acreage.[81]

The relationship between land and water was very complex and not always precise. The documentation is subject to differing interpretations. Clearly, however, in the vast majority of cases water was granted or withheld on the basis of land classification. The case for implied water right can be carried too far. The absence of water provisions in certain land grants cannot be attributed simply to oversight. Not all land grants, not even all farming grants, were intended to convey water rights. If they were, there would have been no need for the addition of water rights to land grants already held. Just as a land merced did not automatically convey subsoil rights, neither did it automatically extend water rights. In some limited cases it did, but in many others it did not.

NOTES

1. Of the many valuable studies of Spanish American land tenure only two fully appreciate the crucial role of water: Charles H. Harris III, *A Mexican Family Empire: The Latifundio of the Sánchez Navarros, 1765–1867* (Austin: University of Texas Press, 1975), and William B. Taylor, *Landlord and Peasant in Colonial Oaxaca* (Stanford: Stanford University Press, 1972). Pioneering efforts in the periodical literature include Richard E. Greenleaf, "Land and Water in Mexico and New Mexico, 1700–1821," *New Mexico Historical Review* 47 (April 1972): 85–112, and William B. Taylor, "Land and Water Rights in the Viceroyalty of New Spain," *New Mexico Historical Review* 50 (July 1965): 189–212. Two recent monographs address the issue: Charles T. DuMars, Marilyn O'Leary, and Albert E. Utton, *Pueblo Indian Water Rights: Struggle for a Precious Resource* (Tucson:

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University of Arizona Press, 1984), and Michael C. Meyer, *Water in the Hispanic Southwest: A Social and Legal History, 1550–1850* (Tucson: University of Arizona Press, 1984). This article relies heavily on the latter.

2. The authorization to the presidio commanders came in a dispatch from Commandant General Pedro de Nava on 22 March 1791. Quoted in Leonidas Hamilton, *Mexican Law: A Compilation of Mexican Legislation* (San Francisco: n.p., 1882), pp. 99–100.

3. See G. Micheal Riley, *Fernando Cortes and the Marquesado in Morelos, 1522–1547* (Albuquerque: University of New Mexico Press, 1973), pp. 57–58.

4. José M. Ots Capdequí, *El Régimen de la tierra en América Española durante el Período Colonial* (Ciudad Trujillo: Universidad de Santo Domingo, 1946), pp. 61–64.

5. The most comprehensive discussion of Spanish land policy in New Spain is contained in François Chevalier, *La Formation des grands domaines au Mexique: Terre et société aux XVI–XVII siécles* (Paris: Université de Paris, 1952). The English condensation without the copious footnotes was published under the title *Land and Society in Colonial Mexico* (Berkeley: University of California Press, 1970).

6. For the acquisition of water rights, see Meyer, *Water in the Hispanic Southwest*, pp. 133–44.

7. Chevalier, *La Formation des grands domaines*, p. 63.

8. Thomas F. Glick, *Irrigation and Society in Medieval Valencia* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1970), p. 13.

9. *Las siete partidas del sabio rey don Alfonso* (Madrid: n.p., 1789), Partida 3, Título 28, Leyes 3, 6.

10. Partida 3, Título 28, Ley 8. Spanish American water law still distinguishes between water for domestic purposes, such as human consumption or bathing, and water for industrial or irrigation purposes. See Ana Hederra Donoso, *Comentarios al código de aguas* (Santiago: Editorial Jurídica de Chile, 1960), pp. 3–4.

11. "Reglamento General de las Medidas de las Aguas," in Mariano Galván Rivera, *Ordenazas de tierras y aguas: O sea formulario geometrico-judicial* (Mexico: n.p., 1849), p. 159.

12. *Recopilación de leyes de los reynos de las Indias*, 4 vols. (Madrid: Ediciones Cultura Hispánica, 1973), Libro 3, Título 1, Ley 1.

13. Juan de Solórzano Pereira, *Política indiana*, 5 vols. (Madrid: Compañía Ibero-Americana de Publicaciones, 1930), Libro 6, Capítulo 12, Número 3.

14. *Recopilación*, Libro 4, Título 17, Ley 5.

15. A document of 1731 from Texas, for example, claims that the right to a certain water source was not only for domestic use but also for irrigation: "para gozar sus benefisios tanto en las tierras de labor [como] en las casas" (Juan Leal Goras to Juan Antonio Perez de Almazan, 27 July 1731, Archivo General de la Nación, Provincias Internas, Vol. 163, Exp. 3. Hereafter cited as AGN with appropriate information.).

16. Bartolomé Rosales to Governor Manuel Muñoz, March 1791?, Bexar Archives, Reel 21. Hereafter cited as BA with appropriate information. See also Manuel Flores de Valdes to Governor Muñoz, 17 February 1791, BA, Reel 24; Governor Muñoz to Flores de Valdes, 17 February 1791, BA, Reel 24; and Félix Herrera to Governor Muñoz, November 1793, BA, Reel 24.

17. Nemesio Salcedo to Antonio Cordero, 6 March 1809, BA, Reel 40.

18. Robert I. Burns, "Irrigation Taxes in Early Mudejar Valencia: The Problem of the Alfarda," *Speculum* 44 (October 1969): 561.

19. "Las cosas que comunalmente pertenecen a todas las criaturas que biuen en este mundo, son estas; el ayre, e las aguas de la lluuia, e el mar, e su ribera. Ca qualquier criatura que biua, puede usare de cada vna destas cosas, segun quel fuere menester" (Partida 3, Título 28, Ley 3).

20. In 1674 French scientist Pierre Perrault established that springs were fed by earthly precipitation, not by a wondrous subterranean source; the discovery never caught up to Spanish jurisprudence.

21. Partida 3, Título 32, Ley 19. This use is confirmed in Joaquín Escriche, *Diccionario razonado de legislación civil, penal, comercial y forense* (Madrid: Calleja e Hijos, 1842), p. 408.

22. Francisco Domínguez y Company states that common land held by the village could not be cultivated. In northern New Spain, however, it was often cultivated. See Domínguez y Company, "Funciones económicas del cabildo colonial Hispano-americano," in Rafael Altamira y Crevea *Contribuciones a la historia municipal de América* (México: Instituto Panamericano de Geografía e Historia, 1951), pp. 165–67.

23. *Recopilación*, Libro 4, Título 17, Ley 5.

24. "Reglamento General de las Medidas de Agua," in Galván Rivera, *Ordenanzas*, p. 158.

25. See, for example, Autos y ynformacionez echas contra Franco Montes alias el Pastor de Nacion Pima, a pedimto del el comun pueblo de Cucurpe, Año de 1743, Archivo Hidalgo de Parral, Reel 1723B. Hereafter cited as AHP with appropriate information. See also auto del Alcalde Major Francisco Bueno de Bohorques y Concuera, Santa Fe 16 July 1720, Spanish Archives of New Mexico, 11, 1274. Hereafter cited as SANM with appropriate information.

26. Medidas de tierras y modo de medirlas que estan en uso segun las ordenanzas, AGN, Archivo Histórico de Hacienda, Temporalidades, Leg. 1165. Smaller cattle and sheep ranches were called *criaderos de ganado major* (only 1,084 acres) and *criaderos de ganado menor* (864 acres), and they too contained only a small percentage of cropland. See, as an example, Amparo de posesion de tierras a favor de Joseph de Torres y Vergara, 12 November 1717, AGN, Mercedes, vol. 70, fol. 32.

27. V Exa aprueba las diligas . . . al Regor Dn Franco Manl de las Puente, 11 April 1752, AGN, Mercedes, Vol. 76, Fol. 154.

28. Confirma la composicion de las tierras que se espresan hecha por el Señor Juez Privativo de Ventas y composiciones, 18 September 1734, AGN, Mercedes,

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Vol. 73, Fol. 99. Subsequent grants made to the Garza Falcón family increased their water rights on the Sabinas River. See Harris, *A Mexican Family Empire*, p. 9.

29. H. Bradley Benedict, "The Sale of the Hacienda of Tabaloapa: A Case Study of Jesuit Property Redistribution in Mexico, 1771–1781," *The Americas* 32 (October 1975): 177.

30. Thomas de Uribe Bracamonte to Sor Fiscal, 20 December 1702, AGN, Tierras, Vol. 1427, Exp. 13.

31. Tlaxcalan colonization in Coahuila can be traced in part in Testimonio de Autos Fhos sobre Providencias y Conberziones de la Provinzia de Coaguila, Año de 1712, Archivo General de Indias, Audencia de Guadalajara, 142. Hereafter cited as AGI with appropriate information.

32. Santa Cruz del Rio Nazas contra Don Philipe de la Cueba Montano, 12 July 1649, AHP, Reel 1653B.

33. Viceroy Count Revillagigedo to Governor Codallos y Rabal, 16 March 1747, SANM, 1, 1347.

34. Juana Benavides to Ignacio Alori, 23 March 1772, SANM, I, 45.

35. Real Despacho. D. Juan de Acuña, Marqués de Casafuerte, 12 March 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

36. Bartolomé Lobato to Governor Juan Ygnacio Flores Mogollón, 1714, SANM, I, 433.

37. Merced to Lobato from Governor Flores Mogollón, 27 August 1714, SANM, I, 433.

38. Examples abound throughout northern New Spain. See, for example, Ignacio Roybal to Governor, n.d., SANM, I, 1339; Edmund Quirk to Lieutenant Governor, 13 May 1803, BA, Reel 31; Nemesio Salcedo to Antonio Cordero, 3 June 1806, BA, Reel 43; Juan Anto Saucedo to Muy Illstre Ayntamto, 8 November 1823, BA, Reel 75; Expediente formado por Dn Francisco de la Fuente, vecino de la villa de Saltillo, sobre que sele despache titulo de confirmacion de unas tierras, 1789, AGN, Tierras, Vol. 1186, Exp. 2.

39. Myra Jenkins, "The Baltasar Baca Grant," *El Palacio* 68 (Spring 1961): 55.

40. Merced to Ignacio Roybal from Marques de la Nava de Brazinas, Governor and Captain General of New Mexico, 4 March 1704, SANM, I, 1339.

41. Consesion del sitio de ganado mayor nombrado Palmarrito, sito en la Jurisdiccion de Todos Santos hecha por el Real Visitador Conde de José de Galvez a favor de Mariano de la Riva, 8 April 1769, Archivo Histórico de Baja California Sur, Leg. 2, Doc. 9. Hereafter cited as AHBCS with appropriate information.

42. Consesion del sitio de ganado mayor nombrado Angel de la Guarda sitio en el municiplidad de San Antonio hecha por el juez privativo de tierras, Don Manuel García Morales a favor de Cristobal Geraldo, 3 February 1770, AHBCS, Leg. 2, Doc. 23.

43. VE Aprueba y confirma la merced ynserta hecha al Capitan Don Thomas de la Garza Falcón, 1 February 1707, AGN, Mercedes, Vol. 74, fols. 109–10.

44. Examples are found in Concesion del sitio de ganado mayor nombrado San

sito en la municipalidad de San Antonio hecha en 22 de Mayo de 1789 por gento teniente de justicia y comisionado de D. Luis López a favor de Juan Cruz y Osio, AHBCS, Leg. 2, Doc. 98, and Concesion del Sitio de Ganado nombrado San Bernardo sito en la municipalidad de Sr. José del Cabo en 11 de Noviembre de 1800 por el gobernador D. José Joaquín de Arrillaga de Juan Antonio Lucero, AHBCS, Leg. 2, 153.

45. Real Despacho, D. Juan de Acuña, Marques de Casafuerte, 12 March 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

46. Joseph Ramón de Noriega to Juez Comisionado de Tierras y Poblaciones, 25 March 1770, AHBCS, Leg. 2, Doc. 24.

47. Fernando de Villanueva to Governor, 4 April 1671, AGN, Tierras, Vol. 1427, Exp. 13.

48. Juan José Hernandes, Migl Arciniega, and Ramón Musquiz to Ayuntamiento [de Bexar], 8 January 1824, BA, Reel 76.

49. José Manuel Granados to Jefe Político, 27 December 1823, Bexar County Archives, MR-S. Hereafter cited as BCA with appropriate information.

50. Merced to Capn Diego Arias de Quiros by Governor Juan Ygnacio Flores Mogollón, 30 June 1715, SANM, I, 8.

51. Betty E. Dobkins, *The Spanish Element in Texas Water Law* (Austin: University of Texas Press, 1959), p. 130.

52. Taylor, "Land and Water Rights," p. 207.

53. The Spanish Royal Academy dictionary defines *trigo de aventurero* in Mexico as meaning grain grown on unirrigated land (Real Academia Española, *Diccionario de la lengua española* [Madrid: Editorial Espasa Calpe, S.A., 1970], p. 1457).

54. An excellent discussion of this problem is found in Dobkins, *The Spanish Element in Texas Water Law*, pp. 124–27. Dobkins concludes that tierras de temporal are arable land which could be irrigated following rains. Presumably she is speaking of lands that, following rains, might be physically irrigable but not necessarily legally irrigable.

55. Concesion . . . a favor de Joseph Salvador de Castro, 8 November 1768, AHBCS, Leg. 2, Doc. 13.

56. In their book on agriculture in Mesoamerica, Angel Palerm and Eric Wolf also distinguish between "agricultura de temporal or secano y de regadío" (*Agricultura y civilización en Mesoamérica* [México: Sep Setentas, 1972], p. 26).

57. Gaspar Flores to José de Sandoval, 31 December 1824, BCA, MR 63.

58. Plan de Pitic, AGN, Tierras, Vol. 2773, Exp. 22. Article 13 states: "formara el Comisionado un prudente calculo de todo terreno util y fructifero que por medio de la Azequia construida puede regarse y del restante que sin tener este beneficio conduze aproposito para siembras y Cosechas de Temporal. . . ."

59. Galván Rivera, *Ordenanzas de tierras y aguas*, p. 91.

60. François Chevalier translates *pan llevar* as wheatland. See his *Land and Society in Colonial Mexico*, p. 66. Because of the great emphasis of the Crown on increasing wheat production, it is likely that irrigable acreage in central New

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Spain was more apt to be devoted to wheat than elsewhere in the viceroyalty. On the northern frontier, however, crops other than wheat were grown legally on tierras de pan llevar. These lands carried water rights.

61. "Las tierras de pan llebar son: las cultivadas y que se riegan por medio de aguas preparatorias á voluntad" (*Colección decretos y ordenes dictados por el honorable Congreso Primero Constitucional de Chihuahua, en sus sesiones ordinarias desde l° de julio hasta 30 de setiembre de 1827* [Chihuahua: Imprenta de Gobierno del Estado, 1828], p. 60).

62. The concept of implied water was used in medieval Spain. A grant for *tierra in regadivo* entitled the owner to irrigation water even though water might not have been specified in the grant. See Glick, *Irrigation and Society*, p. 13.

63. Manuel Yurri Castillo de sor. Gefe del Departamento de Texas, 4 July 1825, BA, Reel 82.

64. Galván Rivera, *Ordenanzas de tierras y aguas*, p. 75.

65. In his legal history of San Francisco, John Dwinelle defines suertes as "cultivable lots of land," but does not treat the issue of their relationship to water (*The Colonial History of the City of San Francisco* [San Francisco: Towne and Bacon Book and Job Printers, 1863], p. 8).

66. Concesion de tres suertes . . . a favor de Gerónimo Chino . . . 30 August 1768, AHBCS, Leg. 2, Doc. 5.

67. Concesion de cuatro suertes . . . a favor de Felipe Romero, 30 August 1768, AHBCS, Leg. 2, Doc. 6.

68. José Antonio Munguía and José María Lasso to José de Galvez, 16 October 1768, AHBCS, Leg. 2, Doc. 10.

69. "tendran dro a dos suertes de trra de dos cientas varras en quadro, una de riego y otra de temporal," Noticia delas Provas de Sonora, 20 April 1774, AGI, Audiencia de Guadalajara, 586.

70. Malcolm Ebright, "The San Joaquín Grant: Who Owns the Common Lands?" *New Mexico Historical Review* 57 (January 1982): 19.

71. Palerm and Wolf, *Agricultura y civilización*, p. 54.

72. Elsewhere in Spanish America the labores are most commonly referred to as *chacaras*.

73. William Dusenberry, *The Mexican Mesta: The Administration of Ranching in Colonial Mexico* (Urbana: University of Illinois Press, 1963), p. 101n.

74. See, as examples, *Recopilación*, Libro 4, Título 3, Ley 8; and Libro 4, Título 5, Ley 9; Libro 4, Título 7, Ley 14; and Libro 6, Título 3, Ley 8. An example of the same juxtaposition in the contemporary documentation can be found in Testimonio de diligencias y derrotero practicado en virtud de Superior Horn . . . por el Gral. Don Pedro de Rabago y Theran . . . Año de 1748, AGN, Historia, vol. 52.

75. Juana Benavides to Alcalde Mayor Manuel Garita Pareja, 3 March 1772, SANM, I, 29.

76. Juan Real Goras to José Antonio Perez de Almazán, 27 July 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

77. Pedro de Rivera to Viceroy, 1 December 1731, AGN, Provincias Internas, Vol. 163, Exp. 3.

78. Benedict, "The Hacienda of Tabaloapa," p. 176.

79. After the Texas mission of San José was secularized, its land was divided. Among those granted a plot was José María Escalera, who received part of a labor without water ("A d. Jose Mª Esclera se le ha mercenado y posesionado de un [illegible] de labor sin agua en las tierras. . . ." Gaspar Flores, 31 December 1824, BA, MR 91).

80. "Reglamento General de las Medidas de las Aguas," in Galván Rivera, *Ordenanzas de tierras y aguas*, p. 166.

81. Caytano Trevino to Governor Francisco Bruno Barreros, 9 June 1818, AGN, Tierras, Vol. 1419, Exp. 3.

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