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hand tools could assemble the parts and erect the mills to pump water anywhere that well drillers with portable rigs had sunk wells. As machines, windmills used few materials, keeping the costs of production and shipping low. Once erected they required only minimal maintenance, especially after the introduction of self-oiling designs early in this century. Finally and most important, windmills used in Kansas were self-governing. They did not require human attention either to turn them toward the wind or to regulate their speeds of operation. Because of these keys to success, they have continually served a valuable role in bringing groundwater from the depths wherever needed.[27]

Windmills successfully aided many thousands of Kansans for decades. What was their impact on Kansas and Kansans? In combination with drilled wells, windmills made it possible for humans to secure fresh water almost anywhere they wanted to live. Without the technological innovations of windmills and drilled wells, settlement of inhospitable semiarid portions of the state probably would have been limited for many years to areas with dependable water sources from rivers or springs. With these mass-produced products of industrial America, the settlement pattern became one of generally even population distribution across the land. The social and economic impact of this spread of people over the land can only be hypothesized.

Not all the contributions of the windmill, however, were necessarily positive. These machines did allow a more-or-less even settlement of rural Kansas, but at the same time they also introduced the concept of using machines to pump water from drilled wells. This innovation eventually led Kansans to use power pumps to create an artificial environment by irrigating thousands of acres of farmland, providing temporary wealth but seriously depleting groundwater resources that otherwise might have been used by future generations.

Finally, the windmill left its mark on the psyche of Kansans and all other Plains folk in North America. Windmills often were the first visible signs of human habitation on the prairies, standing like sentinels to show that people were attempting to survive in an often harsh environment. Even when humans failed in their efforts and their houses tumbled in, windmills frequently remained standing as evidence that people had once lived on that spot. Consequently windmills became icons of the western experience for many thousands of people—symbols for Kansans of their efforts and the efforts of their hardy, resourceful predecessors to make homes on the land.[28]

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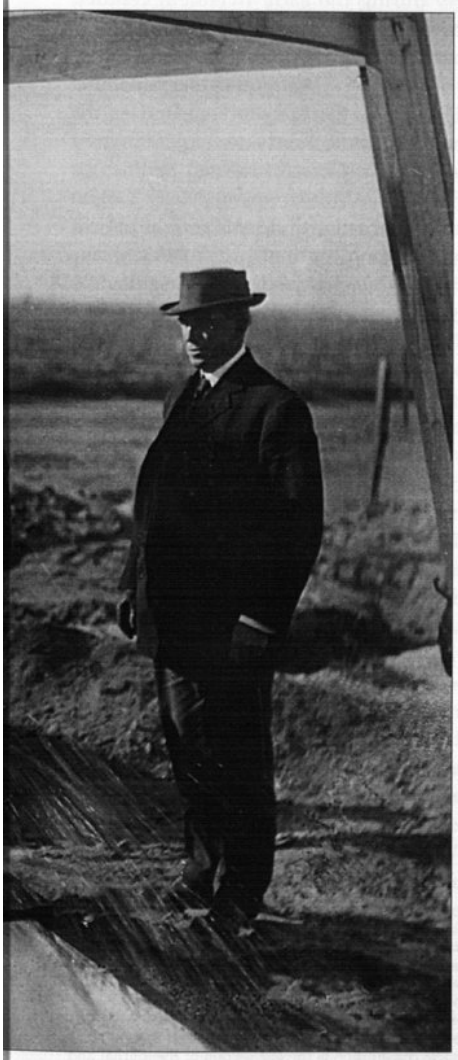
27. These elements, which led to the success of the windmill in the West, are first known to have been posed by longtime windmill company employee Henry J. Barbour in response to a query from historian Walter Prescott Webb. Henry J. Barbour to W[alter] P[rescott] Webb, July 15, 1927, typescript, Walter Prescott Webb Papers, Center for American History, University of Texas at Austin.

28. T. Lindsay Baker, "Windmills as Components of the Built Environment of the Great Plains" (paper presented to "Architecture and the Great Plains: The Built Environment, Past and Present" symposium, University of Nebraska, April 24, 1993).

The Waterscape

Since relative scarcity of water and unreliability of rains were among the few constants of the Kansas land, irrigation pumping plants, such as this one in Finney County (1911–1925) became a significant feature of the waterscape.

and the Law



Adopting Prior Appropriation in Kansas

by Robert Irvine

The state of Kansas lies astride the ninety-eighth meridian, a line frequently used to demarcate east from west, wet from dry, and subhumid from semiarid.[1] Like many other states along this imaginary line, Kansas developed institutions and adaptations in response to the wide variety of environmental and hydrological conditions that existed within its single jurisdiction. At statehood Kansas adopted the riparian water law doctrine and, for the next eighty-five years while the states to the north, south, and west modified or abandoned the riparian doctrine, Kansas did little. Pressure to change the water law became overwhelming, however, and in 1945, with the support of the governor and water law experts, the legislature altered the law, adopting a prior appropriation principle similar to that administered in most other western states.

The history of water law development in Kansas or any other state is an important, albeit somewhat esoteric, field of study. Under a riparian system, the right to use water was attached to the

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1. Walter Prescott Webb, *The Great Plains* (New York: Grosset and Dunlap, 1931), 7, 319; Patricia Nelson Limerick, *The Legacy of Conquest* (New York: W.W. Norton, 1987), 135.

land and was a part of the property rights. Everyone with land along a waterway could make use of the stream as long as the use was reasonable and did not materially affect the quality or quantity of water in the river flowing to their downstream neighbors. Groundwater, in contrast, was understood as an absolute property right. The alternative water law doctrine, prior appropriation, allowed holders of water rights to withdraw water and apply it where they chose. Under prior appropriation, water could be claimed for use on a first-come basis. This right was assured regardless of the user's location on the waterway. Users who came later were assigned junior rights in the order in which they arrived and put the water to use. Thus, in years of drought, the person with the senior-most right would receive a full allotment before the holder of a junior right would receive a drop.

The Kansas journey from riparian to prior appropriation water law resulted from the changing needs of its citizens and the profound differences in geography from east to west. In the early years of Kansas settlement when most people lived in the eastern half of the state, riparian water law served the state well. Amply watered eastern Kansas did not possess the arid conditions that spawned prior appropriation. Rivers flowed year-round, and sufficient rain fell in the eastern region of the state, offering little impetus to change the existing law. Whereas other states experienced more uniform precipitation and water demands, Kansas contended with great variety. As the population of the western portion of the state grew, the state laws and institutions were forced to contend with the statewide differences. Since riparian law also did not adapt well to the changes in technology and agricultural methodology, the doctrine eventually constrained people more than it facilitated orderly development of resources.[2] Kansas remained an apparent water law anomaly for a time because its physical environment was anomalous, and the relationship between the disparate regions of the state and their needs had not been fully determined.

Increasingly during the early twentieth century, policy and lawmakers believed the existing legal framework for controlling and parceling water resources resulted in wasted water and lost economic opportunity. The solution to this problem, argued the state's chief engineer and other water experts, was a new water law that improved citizens' abilities to capitalize on the physical environment. Many Kansas lawmakers and concerned individuals sought reform from the very beginning, but not until 1945 did significant demand exist to change the water rights doctrine. The legal change that came about through the 1945 Water Appropriation Act affected the state's ecology and economy and reflected how Kansans viewed themselves and their environment.

When Kansans met in 1859 to create a state constitution, they did not provide an explicit water law.[3] Because the convention did not address water law, the practical result was that upon admission to the Union in 1861 Kansas embraced the common law or riparian doctrine of water rights. This doctrine served the needs of the people then in the state, but eventually it proved to be a poor environmental fit given the economic aspirations of various settlers.

The law became a poor fit because both technology and circumstances changed. Over time, for example, the need to keep water in the streams to turn mills decreased and pressure to withdraw water and apply it to fields increased. The relative scarcity of

2. James Willard Hurst, *Law and the Conditions of Freedom* (Madison: University of Wisconsin Press, 1949), 6. Hurst argues that the purpose of law is to "promote the release of individual creative energy and to mobilize the resources of the community to help shape the environment." *The Appropriation of Water for Beneficial Purposes: A Report to the Governor on Historical Physical and Legal Aspects of the Problem in Kansas* (Topeka, Kans.: State Printer, December 1944). The report instigated the adoption of a doctrine of prior appropriation and makes clear the reason that "new uses did not conform to the common law rule."

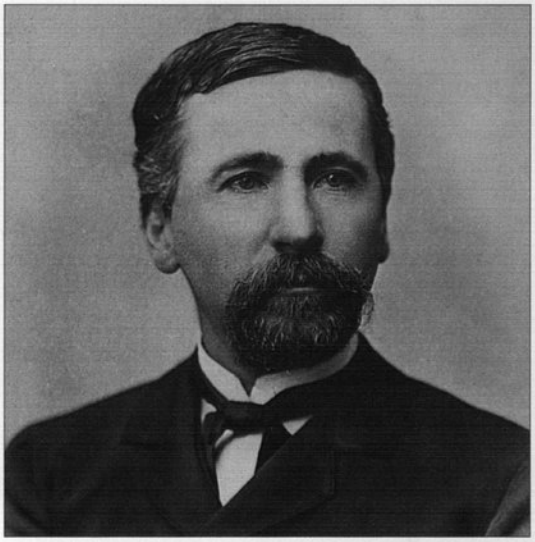
3. Ariel P. Drapier, *Secretary's Journal of the Kansas Constitution: Proceedings and Debates Embracing the Secretary's Journal* (Wyandot, Kans.: S.D. Macdonald, 1859). The constitution is the last section of the journal and numbered pages 1–16; discussion of swampland is a resolution at the end of this section, asking Congress to appropriate the state's swamplands for the benefit of common schools.

water and the unreliability of rains were the few constants of the Kansas land and waterscape. As the potential benefits of irrigation became apparent to many Kansans, the inability of riparian doctrine to encourage or allow irrigation also became clear.

The expanding population west of the ninety-eighth meridian was another important change. Increasingly, as people settled the western portions of the state they encountered conditions that required irrigation for successful farming. Irrigation companies along the Arkansas River in Colorado demonstrated that farming could be successful when supported by prior appropriation law.[4] Nevertheless, the progression from riparian to prior appropriation in Kansas required more time and the efforts of countless people and entire governmental agencies.

The question of groundwater regulation eventually would play a major role in formulating Kansas water law, but most early water contests involved surface water. Not until the mid-twentieth century did technology exist to efficiently tap the Ogallala and other deep aquifers; combined with increasing demands for water, this technology caused groundwater to take center stage in the legal battle. When groundwater emerged as the most important and fought-over commodity, it was governed on the basis of the legal traditions and precedents built in the state over decades of surface water cases.

The first significant court case to deal with water law was *Shamleffer v Council Grove Peerless Milling Company* in 1877.[5] The Peerless Milling Company dug a channel diverting the waters of the Neosho River to its mill through the land owned by W.F. Shamleffer without his consent. This case set a precedent for virtually all future Kansas water law decisions in that it powerfully affirmed riparian doctrine. Justice David J. Brewer, who was one of the state's best-known jurists, serving on the United States Supreme Court from 1889 to 1910, spoke for the Kansas Supreme Court in *Shamleffer*. Brewer wrote that "every man through whose land a stream of water runs is entitled to the flow of that stream without diminution or alteration." In the same decision Justice Brewer reaffirmed the principle that the rights to water "is annexed to the soil, use does not create it, and disuse cannot destroy or suspend it."[6]



In 1877 W.F. Shamleffer brought suit against the Peerless Milling Company in Council Grove regarding a channel dug on the Shamleffer land from the Neosho River to the Peerless mill. The case set a precedent for virtually all future Kansas water law decisions by affirming riparian doctrine.

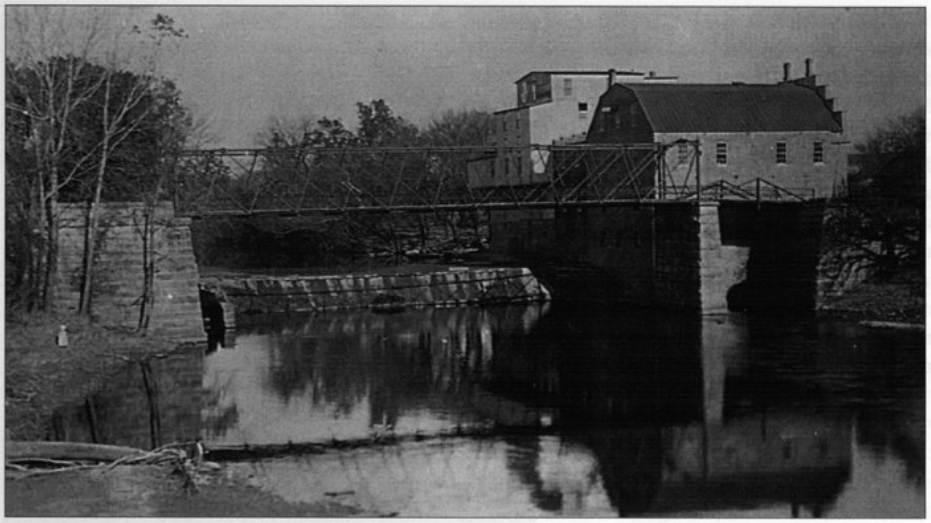
Four years later in the *City of Emporia et al. v Soden*, the court answered questions left unaddressed in *Shamleffer*.[7] The *Emporia v Soden* decision spoke to both

4. James E. Sherow, *Watering the Valley: Development Along the High Plains Arkansas River, 1870–1950* (Lawrence: University Press of Kansas, 1990).

5. *Shamleffer v Council Grove Peerless Milling Co.*, 18 Kan 24 (1877).

6. Ibid., 24, 33; Michael J. Brodhead, "Visions of a Better World: Comparisons of Kansas Jurists David J. Brewer and Frank Doster," *Kansas History: A Journal of the Central Plains* 16 (Spring 1993): 44; *see also* Michael J. Brodhead, *David J. Brewer: The Life of a Supreme Court Justice, 1837–1910* (Carbondale: Southern Illinois University Press, 1994).

7. *City of Emporia v Soden*, 25 Kan 410 (1881).



After the City of Emporia began pumping water from this pond near the Soden Mill, the mill machinery often did not have enough water to operate. Mill owner William T. Soden sued the city, claiming that direct pumping of the pond illegally depleted the flow. The court determined Soden was due an undiminished flow at the river.

surface and groundwater rights. Like many other western water law cases, this one built upon complicated actions occurring over several years. First a riparian owner built a dam to supply a mill with power. The dam then created a pond but did not divert the flow of the river. In 1861 the mill's builder purchased "right of flowage" from an upper landowner—essentially an appropriative act unendorsed by state law.[8] No challenges arose to this arrangement until the City of Emporia bought land adjoining the pond in 1881 and dug a well to collect percolated water from the pond and supply the city with water. The city also installed two pipes, one from the well to the city and another directly into the pond.[9]

At times the stream did not contain enough water to work the mill machinery, and mill owner William T. Soden sued the city asking the court for an injunction; Soden claimed the city's direct pumping of the pond illegally depleted the flow. The supreme court of Kansas supplied an injunction, and the City of Emporia appealed. The issue before the supreme court was the legality of permanently reducing the flow in a river. Had it wanted to embrace prior appropriation, the court could have used the mill's senior use right as sufficient reason to supply the injunction. Instead it chose a different reasoning. In *Emporia v Soden* the court held that, although a riparian owner may take water for domestic purposes and water livestock without worry of depriving lower users, individual citizens of a city were not riparian owners. Soden therefore was due an undiminished flow of the river.

Speaking on the subject of groundwater, the court asserted the common law doctrine by saying the water was the "property of the owner of the surface and he could use it all, or any part, and was not to be held accountable to his neighbor and his neighbor could not stop him from using all the water that he could appropriate."[10] This statement affirmed that groundwater use was an absolute property right and not subject to interference by neighbors or the state.

8. Ibid. "Right of flowage" is the term used in the decision.

9. Ibid., 410–12. For a short synopsis of this case, *see* Earl B. Shurtz, *Kansas Water Law* (Topeka: Kansas Water Resources Board, 1967), 10; *see also* Arno Windscheffel, "Water Law in Kansas," *Journal of the Bar Association of the State of Kansas* 23 (November 1954): 172–73.

10. *City of Emporia v Soden*, 25 Kan 410.

The most vexing problem when considering Kansas water law is the tremendous hydrologic variability across the state, which is a primary reason Kansas was the last western state to adopt prior appropriation doctrine. The eastern extreme, unlike the western, has several significant perennial rivers whose flow is dependable. Eastern Kansas receives more than double the precipitation of western Kansas and has a longer growing season. In eastern Kansas dryland farming techniques work well, while the same techniques in western Kansas pose a significantly higher risk.

Irrigated agriculture offered an effective alternative to dryland farming, and during the late nineteenth century farmers gradually adopted this option. While groundwater could be used for irrigation, the pumping technology and energy demands prior to the mid-twentieth century required that any large-scale irrigation utilize surface flows. Irrigation also entailed greater capital costs and encouraged the development of ironclad water rights, such as those guaranteed by prior appropriation.[11] A prolonged discussion in the state regarding how best to regulate water use and water rights resulted from the realities of the differing Kansas geography.

One troubling and contentious issue stemmed from the fact that altering the water law meant extinguishing some property rights to enumerate and establish prior appropriative rights. Legislators and judges were hesitant to alter property rights and had to be convinced of the necessity of doing so. Ultimately the legislature was persuaded when it became apparent that only prior appropriation would increase the ability of the state's residents to harvest and use the natural resources.

Sentiment backing this change grew because the water in rivers and streams was insufficient to satisfy everyone's needs. Moreover, almost any use at all beyond the permissible domestic uses caused a material depletion downstream. Kansas farmers interested in irrigation were all the more frustrated with riparian law because they were in a geographical position to know about the success of corporate irrigation projects along the Arkansas River in Colorado. These irrigation companies were founded on the assumption of acquired and acquirable water rights.[12]

In response to internal pressures for water law change, the 1886 Kansas irrigation statutes provided a mechanism by which "the right to use running water flowing in a stream or river could be acquired by appropriation for irrigation purposes . . . and the one first in time should be first in right."[13] On this point of law the legislature was clear, but it went further and "authorized the diversion from natural beds, basins, channels of natural waters west of the 99th meridian, first for irrigation subject to domestic uses and second for other industrial purposes."[14] For the first time Kansas established water rights for irrigation in accordance with the doctrine of prior appropriation. These rights could be bought and sold independently of the property. The Kansas statutes now seemingly embraced the doctrine of prior appropriation and allowed for a significant change, but the judicial interpretation of this act ultimately undermined its effectiveness.

The firmest, most direct assault, and thus endorsement of the riparian doctrine, came in 1905 when the state supreme court rendered its decision in *Clark v Allaman*.[15] The plaintiff, Lizzie Allaman, was an irrigator with the senior right in the western portion of the state who also happened to be downstream of H. A. Clark. A dispute that led to the suit arose during the dry years of 1900–1901. The district court of Wallace County awarded Allaman damages and the superior

11. *Appropriation of Water for Beneficial Purposes*, 44. The governor's committee headed by George Knapp clearly believed that the riparian doctrine discouraged financial investment as the investor had no clear title to a given volume of water.

12. For a full discussion of the irrigation efforts along the Arkansas River during this time, *see* Sherow, *Watering the Valley*.

13. Wells A. Hutchins, *The Kansas Law of Water Rights* (Topeka: State Printer, 1957), 24.

14. Windscheffel, "Water Law in Kansas," 173.

15. *Clark v Allaman*, 71 Kan 206 (1905).

In eastern Kansas, which receives more than double the precipitation of western Kansas and has a longer growing season, dryland farming techniques work well, while the same techniques in western Kansas pose a much higher risk.

right to the majority of the flow in Rose Creek, which flowed into the Smoky Hill River. The supreme court of Kansas reversed the lower court's decision and dismissed its use of prior appropriation reasoning. Speaking for the court in *Clark v Allaman*, Justice Rousseau A. Burch wrote that riparian doctrine, not appropriation doctrine, pertained in Kansas. The court required that water use for irrigation purposes be reasonable and take into account users downstream. Significantly the court noted that both doctrines may exist in the same jurisdiction in Kansas, but the law would recognize only those rights acquired by appropriation and in accordance with the irrigation statutes of 1886. In essence the court ruled that while the legislature could introduce the doctrine of prior appropriation into the state's legal mix, riparian doctrine would continue to dominate.[16]

Had the court been more accommodating of appropriation doctrine, the state could have moved in the direction of a California type of mixed water doctrine. This course of action would have significantly altered Kansas water law and would have aligned Kansas law more closely with its western neighbors. Instead the court minimized the applicability of the appropriation doctrine and maintained the primacy of the riparian doctrine.

Two U.S. Supreme Court cases fueled the demand for change voiced by many Kansas citizens. Both cases pitted Kansas against Colorado in an argument over water in the Arkansas River. Instigated in 1901, *Kansas v Colorado* finally was decided and reported in 1907. The intervening years were devoted to gathering information for the court. These years also corresponded to the consideration of *Clark v Allaman* (1905), which had a curious effect on the national case. The attorneys for Kansas in the federal case argued that Kansas irrigators should have rights to a guaranteed flow in the Arkansas because the state used riparian doctrine, and that should guarantee upstream Colorado use not interfere with the supply of water delivered to Kansas. The state supreme court supported this reasoning by ruling that prior appropriation did not exist in Kansas before 1886 and then remained secondary to riparian doctrine. The hope of the Kansas attorneys that *Clark v Allaman* would strengthen their argument came to naught, however, when the national court handed down its decision.

In *Kansas v Colorado* the Supreme Court concluded that Colorado did not owe a specific amount of water to Kansas. Justice Brewer, formerly of the Kansas Supreme Court, wrote the opinion of the

16. Ibid., 206–7.

Irrigated agriculture offered an effective alternative to dryland farming, and during the late nineteenth century farmers gradually adopted this option. The pumping technology and energy demands prior to the mid-twentieth century required that any large-scale irrigation utilize surface flows, as in this Scott County farm scene from 1930.

court that dealt with the two different water doctrines by ignoring them and formulating a "rule of equity" that examined the amount of water used and its impact. The court concluded that in essence the current division of the Arkansas was equitable but left open the possibility for future economic damage and a return to court.[17] Again in 1943 Kansas asked the federal Supreme Court to require that Colorado deliver a specified amount of water in the Arkansas River. As was the case in the first decision, the U.S. Supreme Court provided no relief for Kansas in *Colorado v Kansas* (1943), and Kansas irrigators continued to watch and grow increasingly frustrated.[18]

For forty years prior to the passage of the 1945 Water Appropriation Act, the realities of the arid High Plains continued to shape the actions and thoughts of people dealing with water rights. The question of water rights affected almost everyone in the state, and the prior appropriation doctrine was one method that could provide dependable supplies of water for some citizens. The court realized the prior appropriation doctrine had some support and said as much in 1915.[19]

In *Feldhut v Brummitt*, the state supreme court explicitly declined the request to adopt prior appropriation doctrine. In doing so the court recognized three distinct regions in the state each with different needs. "In eastern Kansas the Idaho or arid states' doctrine [prior appropriation] would be entirely inappropriate; in central Kansas it would be of doubtful propriety; in the extreme parts of western Kansas it might do very well."[20] But the court had no power to divide the state, according to the justices, despite the state's obvious and different needs. Kansas and its citizens would have to continue to make riparian doctrine work. The court's enumeration of the different hydrologic conditions demonstrates the pressure in Kansas to recognize western aridity and to adjust the laws to fit those conditions.

Throughout the first four decades of the twentieth century, the Kansas Supreme Court decided cases using the riparian doctrine; however, subtle shifts in the application of that doctrine were discernible. In 1915, 1916, 1935, 1936, and 1938 the supreme court reaf-

17. *Kansas v Colorado*, 206 US 46–118 (1907).
18. *Colorado v Kansas*, 320 US 383–400 (1943). For a complete discussion of this case, *see* Sherow, *Watering the Valley*.
19. *Feldhut v Brummitt*, 96 Kan 127 (1915).
20. Ibid., 129.

Under a riparian system, everyone with land along a waterway could make use of the stream as long as the use was reasonable and did not materially affect the quality or quantity of water in the river flowing downstream. Areas like Garden City, along the Arkansas River, had no problem with this system when the river was swollen with the melting snows from the Colorado mountains (left), but this doctrine was problematic in dry seasons when the river ran short of water (right).

firmed the primacy of riparian rights in Kansas.[21] The only departure with this school of judicial thought occurred in 1917 when the court allowed the Atchison, Topeka and Santa Fe Railway to make "reasonable use" of water at the expense of another riparian landowner.[22] This idea of reasonable use replaced the staunch rule of law evident in *Emporia v Soden* and *Clark v Allaman*, prohibiting the diminishment of flow in a river.

By the second decade of the twentieth century many Kansans became increasingly aware that Kansas alone among the seventeen western states lacked an effective method to appropriate water rights; it also was alone in its lack of administrative control over water use and allocation. Kansas, however, appeared as an anomaly for only those Kansans looking west. Those who looked east saw riparian doctrine working effectively and adequately. Indeed some Kansans had long felt that the adoption of irrigation and prior appropriation was an admission of deficiencies. As early as 1881, for example, the *Topeka Daily Capital* argued: "there is no need at this late day of creating prejudice against the state by the supposition that without irrigation her land is incapable of cultivation . . . at present the state is well enough off and sure of crops as any other state."[23]

The Kansas legislature did not accept this philosophy—at least not as the twentieth century unfolded. It recognized the importance of water to the state's prosperity and took action, while others used and fought over this most valuable natural resource. In 1917 the legislature set up an administrative agency within the Kansas State Board of Agriculture to control the allocation and use of water in the state.[24] The legislature reinvented this agency several times, and in 1927 it became the Division of Water Resources, headed by a chief engineer.

21. *Wallace v City of Winfield*, 96 Kan 35 (1915); *Wallace v City of Winfield*, 98 Kan 651 (1916); *Durkee v the Board of County Commissioners of the County of Bourbon*, 142 Kan 690 (1935); *Frizell v Bindley*, 144 Kan 84 (1936); *Smith v Miller*, 147 Kan 40 (1938).

22. *The Atchison, Topeka & Santa Fe Railway Company v Shriver*, 101 Kan 257 (1917).

23. "Irrigation in Kansas," *Topeka Daily Capital*, September 14, 1881.

24. Kansas *Laws* (1917), ch. 172; ibid. (1919), ch. 218; ibid. (1927), ch. 293; ibid. (1933), ch. 271, sec. 7. The 1917 act created the Kansas Water Commission. In 1919 the legislature created the Division of Irrigation within the Kansas State Board of Agriculture headed by an appointed commissioner. In 1927 the legislature created the Water Commission, and the Division of Irrigation was abolished and replaced with the Division of Water Resources within the State Board of Agriculture. Finally in 1933 the act was amended to allow the employment of a chief engineer.

George Selick Knapp (1884–1965), a mechanical and agricultural engineer who was serving as the state's irrigation commissioner, was the obvious choice for the new post. A lifetime champion of irrigation, Knapp claimed in 1938 that Kansas has "the potentialities of being . . . the most fertile agricultural spot in the world." Knapp, like many other influential Kansans, saw great possibility for "improvement" in the Kansas landscape. The capacity to produce a bountiful "Eden" was possible through the correct application and uses of technology, planning, and resources. First and most important in Knapp's opinion, however, the utilitarian prior appropriation doctrine had to transform Kansas water policies away from the obstructive riparian doctrine.[25]

By 1945, eighteen years into Knapp's reign as chief engineer, dissatisfaction with the common law and administrative control of water in Kansas had crystallized with the decision in *State of Kansas ex rel. Peterson v Kansas State Board of Agriculture et al.*[26] Most important, this case ultimately led to a profound change in the law. The case resulted from the City of Wichita's 1943 application to the Division of Water Resources for a permit to appropriate groundwaters for domestic and industrial use from the equus beds in Harvey County. In accordance with his interpretation of state law, Chief Engineer Knapp posted notice of a hearing regarding the application.

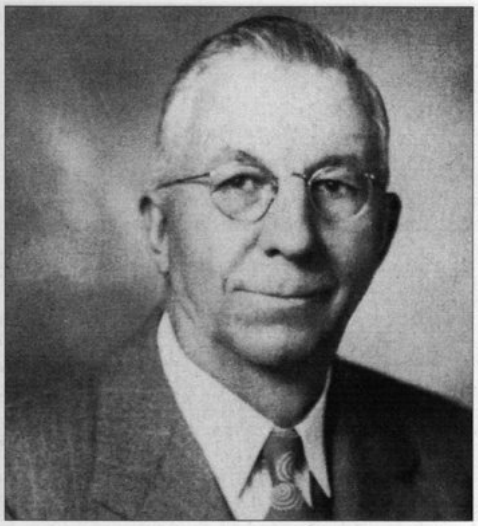
Bernard Peterson, county attorney for Harvey County, and J.G. Somers, Newton city attorney, filed a suit of original jurisdiction in the state supreme court challenging Knapp's right to hold such a hearing. Officials from Newton and Harvey County correctly foresaw the tremendous drain on the equus beds that the City of Wichita could make. These people wanted to prevent the loss of an important and valuable commodity that underlaid their county and lands. Furthermore the loss of local control that the actions of Knapp and the state represented concerned Peterson, Somers, and others. Potentially the state action could deprive the county and city of water and economic returns as well as burden the population with the need to seek permission to dig wells on landowners' private property.

For their part Knapp, the Division of Water Resources, and the board of agriculture believed their authority to hold such a hearing and oversee the appropriation of groundwater came from laws passed in 1933 and 1935.[27] Harvey County and the City of Newton countered and argued, "neither the Kansas State Board of Agriculture nor the Division of Water Resources, nor George Knapp has any authority . . . to regulate, allocate, distribute, grant or withhold per-

25. "Western Kansas Eden Possible by Deep Wells: Bulk of Western Third of State Suitable for Extensive Irrigation, Says George Knapp," *Topeka Daily Capital*, February 27, 1938.

26. *State of Kansas ex rel. Peterson v Kansas State Board of Agriculture et al.*, 158 Kan 603–14 (1944).

27. Kansas *Laws* (1933), ch. 206; Kansas *General Statutes* (1935): 768, 1847.



George S. Knapp

mission to take water by means of wells."[28] Lead attorney Peterson insisted that the right to use groundwater was solely the domain of property owners; he had good reason to hope that the justices would agree with him.

Peterson v Board of Agriculture "tested and challenged the authority of the defendants to allocate, distribute or otherwise interfere with the beneficial use of subterranean waters."[29] In essence the plaintiff asked the court to test and rule on the meaning of the 1917, 1919, 1927, and 1933 statutes and the 1935 amendments that had created and empowered the office of chief engineer and the Division of Water Resources.[30] The question before the justices in this case was a question of law, as the facts of the case were undisputed. Simply stated: did the legislature intend to give Knapp and the Division of Water Resources the power to approve or deny the appropriation of groundwater?

Speaking for an unanimous court, Justice W.W. Harvey stayed close to the question of law when he wrote, "we have no statute which authorizes the Division of Water Resources to regulate, allocate or otherwise interfere with the use and consumption of underground waters."[31] Citing the overwhelming case law, the court found no explicit statute authorizing the defendants to interfere with the consumption of groundwater. The opinion of the court made it clear that the right to use groundwater was to remain a property right without exception. The judges affirmed the common law and its understanding that groundwater belonged exclusively to the property owner who could use the water as he or she saw fit, without governmental interference.

Knapp, the Division of Water Resources, and the board of agriculture believed the legal situation had to be changed if Kansas was to avoid economic waste, ruin, and chaos. Thus, they wasted no time in responding to the court's decision in *Peterson v Board of Agriculture*. Knapp consulted with state attorneys, water authorities, and experts outside the state regarding the appropriate response and, with Secretary of Agriculture J.C. Mohler, decided to ask the governor to appoint a committee to make recommendations for legislative change.[32]

On July 24, 1944, the board of agriculture met and considered the problem of water use in Kansas. According to the board and the Division of Water Resources, unused water existed in many places in the state and should be put to use, but the legal frame-

28. Plaintiffs Petition, September 7, 1943, *Kansas ex rel. Bernard Peterson v Kansas State Board of Agriculture*, case file 36,401, Records of the Kansas Supreme Court, Library and Archives Division, Kansas State Historical Society.

29. Supplementary document amending plaintiff's petition, ibid. The document is not notarized, but it is signed by a justice of the court in a script that is illegible, pages unnumbered.

30. Kansas *Laws* (1917), ch. 172; ibid. (1919), ch. 218; ibid. (1927), ch. 293; ibid. (1933), ch. 271, sec. 7; ibid. (1935), ch. 24-901–24-905; ibid. (1935) ch. 74-509 (inclusive).

31. Syllabus by the court regarding *Kansas ex rel. Bernard Peterson v Kansas State Board of Agriculture*, June 10, 1944, Library and Archives Division, Kansas State Historical Society. The holdings also can be found in 158 Kan 603–14 (1944).

32. George S. Knapp to Spencer L. Baird, district counsel for the U.S. Department of the Interior, July 20, 1944, Water Resources—Winter Wheat, box 10, General Correspondence 1922–1944, Records of the State Board of Agriculture, Library and Archives Division, Kansas State Historical Society, hereafter referred to as Water Resources—Winter Wheat.

work to do this did not exist. Because the board agreed with the supreme court that a legislative change was required, it passed a resolution asking for the committee that Knapp thought was necessary.[33]

The governor responded to the resolution in August and appointed the committee, designating Knapp its chairman.[34] The committee met on September 11, 1944, and agreed to solicit information from experts in the field of water law and development from both in and outside the state. As a part of its second meeting the committee would collect this information to ensure the best possible recommendations for legal changes in Kansas. Knapp proposed three committee meetings to produce a final report with recommendations to the governor and legislature.[35]

In the committee's second and most important meeting, the members solicited information from a variety of sources. Those in attendance included Spencer Baird and W.J. Burke of the Bureau of Reclamation; Wells Hutchins of the U.S. Department of Agriculture; Wardner Scott, state engineer of Nebraska; John Gray, president of the Kansas Reclamation Association; John Riddell, assistant attorney general of Nebraska; and G. Ward of the Federal Land Bank in Wichita. Also invited to attend was Dr. E.P. Aherns, Kansas director of the National Reclamation Association, and other prominent Kansans involved in water law or irrigation.[36]

The committee considered the advice and suggestions from these experts and submitted its report to the governor on December 28, 1944. This report readily recognized that, of the seventeen western states, Kansas alone lacked a statutory measure to appropriate water. Other states adopted appropriative measures, the report concluded, because they "lead to maximum development and use."[37] This reflected an important goal of the committee: to create a water law that would allow maximum development and use of resources in Kansas. Because game, air, and other resources were necessarily held in common and regulated by the state, the report argued, the state should do the same with water.[38] The document further noted that water is a common resource by virtue of its migratory nature. Knapp and his colleagues believed water in Kansas existed either in rivers or as groundwater ultimately because of rainwater. If these waters remained unused, the committee believed they would be wasted by being allowed to flow out of the state, either through rivers or through the strata that confine groundwaters. According to the committee, riparian doctrine retarded development and the application of water for beneficial purposes. The committee argued that "unused water cannot wisely be held in perpetuity for a common-landowner who may never have use for it without resulting in underdevelopment . . . permitting water to flow out of the state as an economic waste and loss of a valuable natural resource."[39]

The report recommended adopting an appropriation system of water rights and establishing administrative control over appropriation. The writers of the report hoped these changes would ensure "protection of developments and financial investments in the works of the diligent person who perfects his use and realizes beneficial returns . . . as against such potentially present and almost valueless undeveloped

33. Resolution adopted by Kansas State Board of Agriculture, State Agencies file: Agriculture State Board, March 17, 1944–March 12, 1945, Correspondence, Andrew F. Schoeppel administration, Records of the Governor's Office, Correspondence, Library and Archives Division, Kansas State Historical Society.

34. Governor Schoeppel to George Knapp, August 17, 1944, Water Resources—Winter Wheat. Included on the committee are H. Buzick, V.W. Mayo, C.C. Green, P.W. Applegate, J.G. Somers, F.G. Guild, W.W.E. Long, A.B. Mitchell, G.R. Munson, and Knapp.

35. Memorandum of First Meeting of Governor Schoeppel's Committee on the Appropriation of Water, received September 18, 1944, Water Resources—Winter Wheat.

36. A comprehensive list of those in attendance at the second meeting is unavailable, although those expressly invited by the committee as a whole can be found in a letter from George Knapp to Governor's Committee, September 28, 1944, Water Resources—Winter Wheat. The committee members were reminded in the letter they "should invite others whom they wish, to have attend." The *Kansas City Times*, October 17, 1944, also carried news of the second and public meeting. The article mentions Spencer Baird, Wells Hutchins, and John Riddell in attendance, and it details Henry Buzick Jr.'s recommendation that water rights be apportioned on the same basis as the appropriation laws for oil and gas. Apparently the committee gave Buzick's plan due consideration as he sat on the committee, but the recommendation cannot be found in any form in the final report.

37. *Appropriation of Water for Beneficial Purposes*, 5.

38. Ibid., 16, 52.

39. Ibid., 43–44; *see also* ibid., comments section, 52. The premise that water flowing out of the state to the ocean is waste is a powerful theme in this report.

By adopting the doctrine of prior appropriation, Kansas joined other western states in participating in the postwar irrigation boom. The new law allowed appropriation of water across the state, and irrigation systems have become popular even in eastern Kansas.

equal rights to divert and use."[40] This scenario played out under appropriation law was preferable to riparian rights, which the committee believed contributed to undeveloped resources and waste.

The committee transmitted the report to Governor Andrew Schoeppel on December 28, 1944. On January 10, 1945, the governor delivered his message to the legislature, which included a discussion of Knapp's committee investigation and recommendations on water. The governor described the problem with the current water rights system and promised to supply each legislative member with a copy of the report. Schoeppel then told members that he deemed the recommendation of the report "wise, expedient and necessary for consideration by this session of the Legislature," and he asked that they "give consideration to this essential problem."[41]

The legislature took up the report, and on March 1, 1945, the Committee on State Affairs introduced its recommendations as House Bill 322. The second reading of the bill came the next day. On March 12, during the afternoon session wherein the committee of the whole met, three minor amendments insignificantly altered the wording in the bill, and the next day the bill was put to a vote. Edwin F. Abels urged passage, arguing that "this bill attempts to lock the door before the horse is stolen."[42] Apparently Abels's logic and reasoning carried the day, as the bill passed the house by a vote of seventy-five to sixteen, with thirty-three representatives absent or not voting. Of the sixteen nay voters, no discernible pattern or uniting factor emerges as to their places of residence or stated occupations, although eight lived on or west of the one-hundredth meridian. Farmers, stockmen, lawyers, lumbermen, and merchants voted against the bill, just as others in the same occupations voted for it.

Formally titled "An Act to Conserve, Protect, and Regulate the Use, Development, Diversion and Appropriation of Water for Beneficial and Public Purposes and to Prevent Waste and Unreasonable Use of Water," the 1945 Water Appropriation Act (WAA) embraced the recommendations in the governor's report almost in their entirety. The state not only supported the recommendations but also the report's reasoning and objectives. Water was a commodity, and failure to use equaled waste. The law was clear on this point: "the right of the appropriator . . . to the use of water shall terminate when he ceases for three years or more to use it for . . . beneficial purposes."[43]

40. Ibid., 44.
41. "Message of Governor Andrew F. Schoeppel," *Kansas House Journal*, January 10, 1945, 14.
42. *Kansas House Journal*, March 13, 1945, 223.
43. Kansas *Laws* (1945), ch. 390, sec. 17.

Beneficial, consumptive use of the resource was something to be encouraged and rewarded.

The new law displaced the previous laws and judicial interpretations that had kept rivers and streams flowing in western Kansas; "beneficial use" had replaced "reasonable use." The 1945 WAA encouraged the development of irrigation and investment and the fullest possible mining of Kansas resources. It also encouraged farmers to take water out of streams or away from riparian habitats for use on cash crops.

Once the legislature passed the 1945 WAA and the governor signed it, the Division of Water Resources started issuing permits. Kansans began applying for permits and creating water diversion and irrigation works at a pace the state had never known. With these permits and water allocations came physical and economic changes including increased economic prosperity.

George Knapp's contemporaries and water development analysts, such as Wells Hutchins and Knapp's replacement as chief engineer, Robert Smhra, hailed the 1945 WAA.[44] In addition to allowing the complete use of water, the law provided for a centralized authority, vested in the Kansas State Board of Agriculture and the Division of Water Resources, to control the state's water. The control implied that water could be scientifically managed for the mutual benefit of all citizens and provide for the most efficient use of a scarce resource. With appropriative water rights, Kansas could move toward the nineteenth-century booster-inspired vision of a "garden"—a place that would produce wealth for all virtuous citizens.

Without dispute, Knapp and the 1945 WAA helped to remake the Kansas landscape. By adopting the doctrine of prior appropriation Kansas joined other western states in participating in the postwar irrigation boom. The new law has appropriated water across the state, not just in the western portion, and irrigation systems have become popular even in eastern Kansas. The law was changed when enough people, especially legal and water experts, believed it had to be. The "good" or "bad" resulting from the new law cannot, however, be simply calculated. The ensuing changes and consequences represented both effective and harmful adaptations to the climate, environment, and hydrologic conditions of the state.

The continued presence of humans living resourcefully on the Plains and the viable ecosystem that continues to exist there attest to the success of some of the Kansas legal and technological adaptations. People attempted to correct environmental conditions in Kansas by adopting irrigation and other methods that produced the desired results. However, the more permanent accounting of the trade-off of flowing streams for rippling wheat fields will be made in terms other than dollar profits, over decades or perhaps even centuries.

The WAA, although challenged and amended and challenged again in following years, assured that "beneficial use" remained the highest and best use of water. With the new water law doctrine the state moved in line with other western states, and created a new concise law without the confusions attendant with a mixed doctrine. The supreme court heard relatively few cases dealing with water rights after the law change beyond affirming the right of the legislature to pass the law and of the Division of Water Resources to administer it. Presumably this streamlining of the legal process leaves Kansans free to attend to the business at hand—developing the water resources of the state. However, the growing agitation to provide for instream flows and environmental health suggests that the law eventually may have to be modified to conform to the current goals, needs, and conditions of the state and its citizens. KH

44. *See* Hutchins, *The Kansas Law of Water Rights*; Shurtz, *Kansas Water Law*; Windscheffel, "Water Law in Kansas."

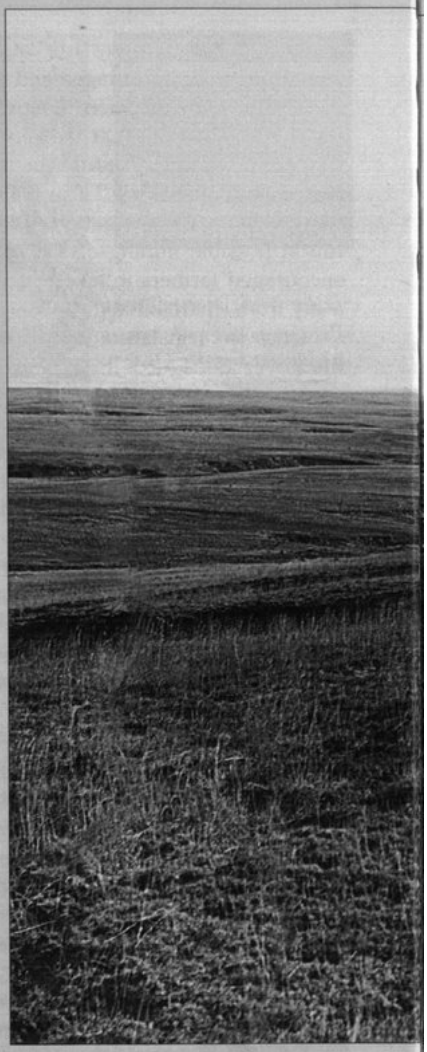
[In Progress] Kansas history: a journal of the central plains

Irrigation *and* Boosterism *in* Southwest Kansas, 1880–1890

by Anne M. Marvin

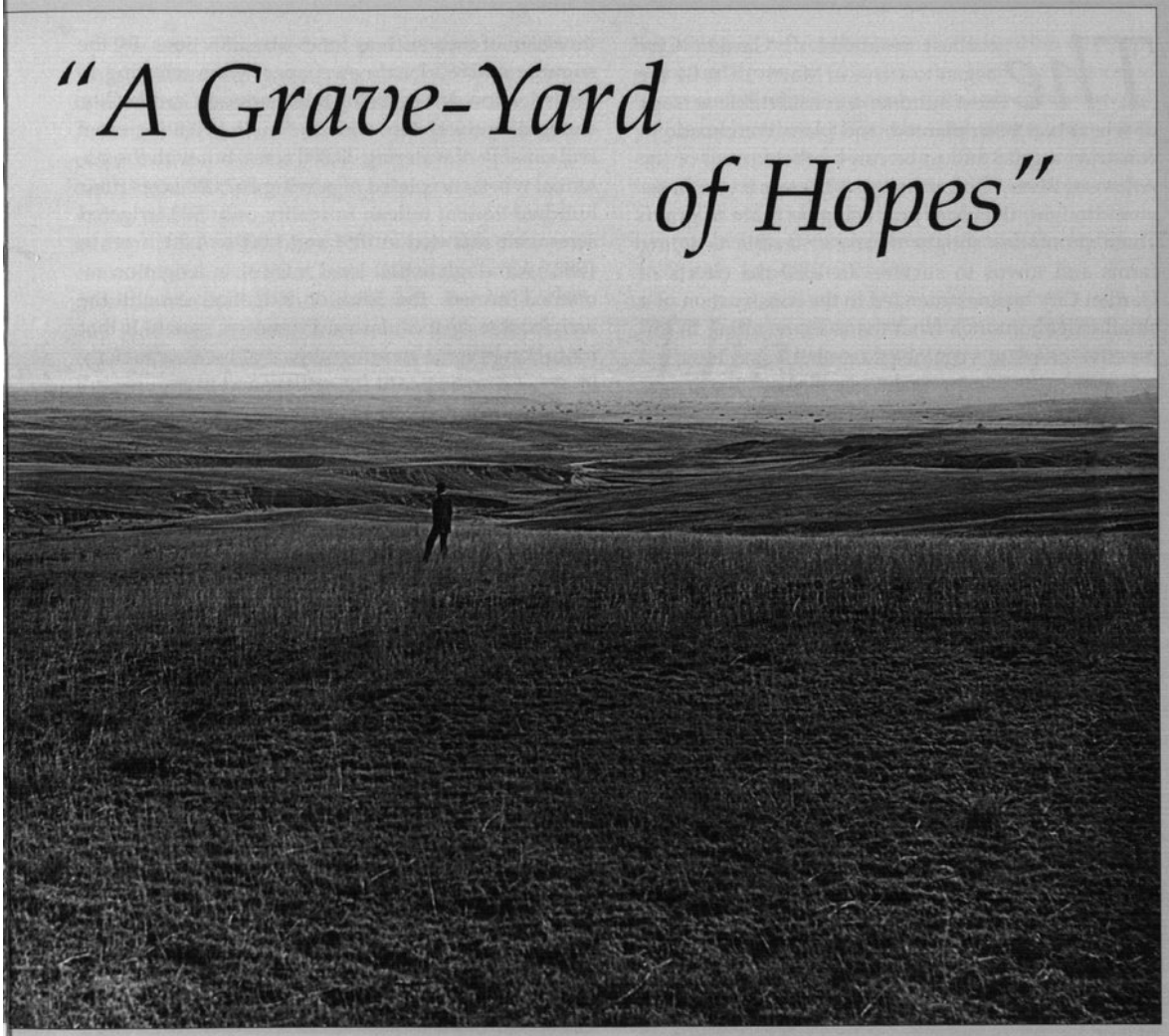
The beginnings of irrigation in southwest Kansas were characterized not only by indecision as to whether irrigation was necessary at all but also by debate over who should be responsible for developing irrigation facilities. Particularly along the Arkansas River in Finney and Kearny Counties, the situation was further confused when the physical realities of irrigation practice became entangled with boosterism and local politics. Although severe drought in the late 1880s convinced many that irrigation was a necessity, legal and economic structures were not in place to support its development. The resulting free-for-all is well illustrated by efforts to bring irrigation out of the valley onto the upland regions north and west of Garden City.

The Arkansas River is a central feature in the landscape of southwest Kansas. During the 1870s railroad builders had followed the river, and settlers had followed the railroad. At that time the Arkansas, still largely unfettered by upstream development, flowed half a mile wide through the future Kearny County.[1] Over many years the stream had formed a flat valley floor, varying in width from less than one mile to more than four miles. Beyond the bottom was an outer valley ranging from five to twenty miles across and rising as much as twenty-five feet above the valley floor. Beyond the valley stretched the gently rolling uplands covered with buffalo grass.[2]



In the late nineteenth century as the promises of early irrigation failed to materialize in southwest Kansas, the vast and semiarid region became a "grave-yard of hopes." Photo taken in Finney County.

"A Grave-Yard of Hopes"



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1. *Lakin Herald*, June 24, 1881. The spelling of the county name changed from "Kearney" to "Kearny" when the county was officially organized on March 27, 1888. To avoid confusion, the latter spelling is used throughout this article except when found in a quotation or a newspaper title.
2. Walter H. Schoewe, "The Geography of Kansas," in Kansas Academy of Science, *Transactions* 52 (September 1949), 291–300; ibid. 54 (September 1951), 295–98; *see also* Don W. Steeples and Rex Buchanan, *Kansas GeoMaps*, Educational Series 4 (Lawrence: Kansas Geological Survey, 1983), 6–7.

The earliest residents of Garden City began to arrive in March 1878. By the next summer a considerable acreage of wheat had been planted, and plans were made to construct a grist mill to be run by the current of the Arkansas River.[3] Unfortunately 1879 was a year of severe drought, therefore producing no grain to grind. Town promoters sought means to enable fledgling farms and towns to survive. In 1880 the efforts of Garden City businessmen led to the construction of a small irrigation ditch from the river, resulting in impressive crops of vegetables on about one hundred acres. This ditch experiment established that irrigation of the bottomlands could be accomplished at moderate cost.[4]

Irrigation enthusiasm flourished in the valley. By mid-August 1881 ten irrigation corporations had filed charters in what are now Hamilton, Kearny, and Finney Counties. They proposed to build irrigation facilities to serve almost all of the valley from the state line to Garden City and beyond. Five actually constructed or attempted to construct ditches to redistribute Arkansas River water.

The intensity of this early irrigation fervor appears puzzling at first, given the lack of experience and scarcity of capital in the region. However, circumstances indicate that irrigation enthusiasm was a symptom more of speculative zeal than of an overwhelming desire to adapt to climatic conditions. This zeal was perhaps most evident in Charles J. "Buffalo" Jones, one of Garden City's first residents. Of the ten ditch companies previously mentioned, five were initiated at least partially through Jones's efforts. The enthusiasm of men such as Jones was infectious. By the summer of 1882 local newspapers were referring to the irrigation system being built around Garden City, comprising thirty-three miles of main irrigating canal and capable of watering 60,000 acres, but with the potential when completed of serving 262,000 acres (four hundred square miles). In reality only 500 irrigated acres were reported in 1881 and 1,000 to 1,200 acres in 1882.[5] Although actual local interest in irrigation remained muted, the idea of irrigation caught the imagination of speculators. Promoters saw to it that irrigation became an integral part of the Garden City image, a drawing card for settlers and investors.

Irrigation boosterism in the 1880s was encouraged by the fact that the Arkansas valley was in the midst of a regional economic boom. The period was one of feverish activity in railroad promotion and town building. Eastern investors eagerly loaned their money, and much of this financial backing was secured with farm real estate mortgages.[6]

Early in the 1880s new settlers had begun to respond to the attractions of southwest Kansas, and in March 1883 a federal land office opened in Garden City. By 1886 boosters claimed a population in Finney County of ten thousand. The population to the west also was rising, as Hamilton County (on the Colorado border) was officially organized in 1886.[7]

3. L.H. Pratt, "A History of the Rise and Progress of Garden City," *Garden City Herald*, December l, 1883; William Ellsworth Smythe, *The Conquest of Arid America*, 3d ed. (Seattle: University of Washington Press, 1969), 109.

4. F.G. Adams, "Irrigation in Kansas," in Kansas Academy of Science, *Transactions, 1879–1880* 7 (Topeka: Kansas Publishing House, 1881), 78; Richard Pfister, *Water Resources and Irrigation, Economic Development in Southwestern Kansas, Part IV* (Lawrence: University of Kansas, School of Business, Bureau of Business Research, 1955), 48–49; Schoewe, "The Geography of Kansas," in Kansas Academy of Science, *Transactions* 56 (June 1953), 177. Several settlers in the area apparently had experimented with small-scale irrigation of garden plots before this time; *see* ibid. and *Garden City Paper*, June 19, 1879.

5. *Irrigator* (Garden City), August 31, 1882. For other descriptions of the canal system, *see* ibid., July 20, September 28, 1882, May 10, August 30, 1883; *Lakin Herald*, February 24, 1883; *Cultivator and Herdsman* (Garden City), August 1884; *Garden City Sentinel*, September 15, 1884; Atchison, Topeka and Santa Fe Railroad, *A Map and Description of the Irrigable and Grazing Lands of the Atchison, Topeka and Santa Fe Railroad Company in Western Kansas* (Chicago: Poole Bros., 1884); *Irrigator*, August 31, 1882; A.T. Andreas, *History of the State of Kansas*, vol. 2 (Chicago: A.T. Andreas, 1883), 1616; Noble L. Prentis, *Southwestern Letters* (Topeka: Kansas Publishing House, 1882), 32.

6. James C. Malin, "The Kinsley Boom of the Late Eighties," *Kansas Historical Quarterly* 4 (February 1935), 23–49, and ibid. (May 1935), 164–87, discusses the boom as reflected in the press in Edwards County, downriver from Garden City. For discussions of the fever of speculation during this period, *see also* Pfister, *Water Resources and Irrigation*, 58–59, and Gilbert C. Fite, *The Farmers' Frontier 1865–1900* (New York: Holt, Rinehart, and Winston, 1966), 117–26.

7. David W. Craft, "A History of the Garden City, Kansas, Land Office, 1883–1894" (master's thesis, University of Kansas, 1969), 12; *Directory of Finney County, Kansas* (Salina: Salina, Kansas Directory Company, 1886), 22; *History of Kearny County Kansas*, vol. 1 (Lakin, Kans.: Kearny County Historical Society, 1964), 102.

The area advertised its own unique version of "rain follows the plow." Prospective settlers were told of the "inexhaustible" supply of water in the Arkansas River, the impressive yields from irrigated plots, and the certainty that irrigation helped to increase rainfall by encouraging more extensive cultivation and by saturating the ground and adding humidity to the atmosphere.[8] Although this theory of causality may not have been scientifically accurate, precipitation had in fact increased. The 1884, 1885, and 1886 seasons brought unusually high rainfall that resulted in fine crops even without irrigation. Unfortunately the increased rainfall discouraged use of irrigation water, which left the ditch companies short of customers and cash. Despite their central role in the boosters' vision of southwest Kansas, irrigation facilities began to show signs of neglect.[9]

As indicated by the low number of irrigated acres, irrigation remained a marginal enterprise during the wet years of the mid-1880s. Locally the physical presence of ditch facilities generated some minor adjustments such as awareness of the need for bridges and of the danger of flooding. Generally, however, irrigation was not viewed as absolutely necessary to the survival of the community, and its development remained unregulated, unsystematic, and whimsical.

The primary role of irrigation as a promotional device rather than as an active feature in the local economy became quite evident with a change in the weather in the late 1880s. The summer of 1887 was dry. Not only was rainfall short but the Arkansas was beginning to reflect the extensive irrigation development upstream in Colorado. In 1888 the economic boom ended rather suddenly with less-than-expected yields of settlers, railroads, industries, rain, and crops. Drought and poor crop production continued into the next year. Since the late 1870s average annual rainfall at Garden City had been slightly more than twenty inches. Between January 1 and December 1, 1889, only twelve inches fell.[10]

The collapse of the boom deflated the hopes of western Kansans, many of whom had invested in the future by taking out mortgages to cover farm improvements or by sinking money into land and community building. With worsening conditions, outside capital began to dry up, causing declines in construction and the loss of cash flow associated with labor and business development. Between 1887 and 1891 the population of Finney County dropped from 8,084 to 2,951, mirroring the general depopulation of western Kansas.[11]

The post-boom years brought changes in attitude among those who remained in the region. Many began to regard irrigation as essential to settlement and agriculture. Demands for more extensive and better-managed irrigation ditches became increasingly urgent. Efforts were made to expand the scope of irrigation beyond the river bottom and onto the northern uplands.

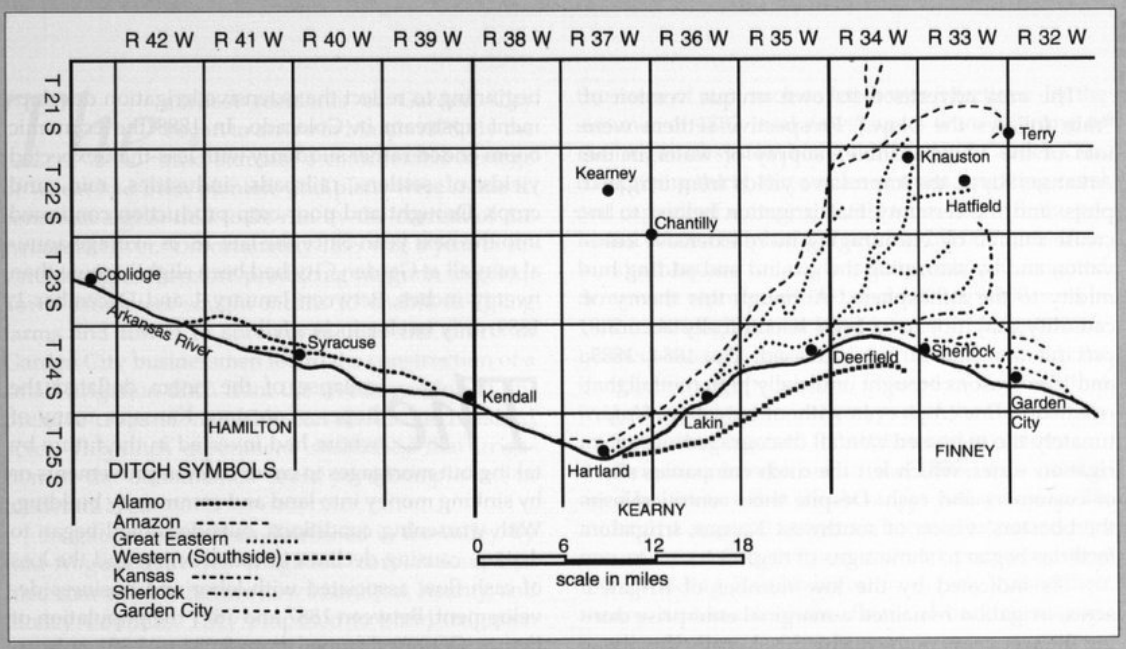
During the dry summer of 1887 rumors began to circulate of a new northside ditch to tap the river just west of the state line. Such a ditch could be led onto the uplands far enough west to provide water for the northern townships in Kearny and adjoining counties. Throughout the summer farmers in northern Hamilton and Kearny Counties met to discuss how to encourage construction of this new irrigating ditch.

8. *See Syracuse Journal* quoting *Garden City Sentinel*, May 20, 1887; *Kearney County Coyote* (Chantilly), June 22, 1887; *Cimarron New West*, February 9, 1888. For a discussion of the "rain follows the plow" theory, *see* David Emmons, *Garden in the Grasslands: Boomer Literature of the Central Great Plains* (Lincoln: University of Nebraska Press, 1971), chapter 6; Paul D. Travis, "Changing Climate in Kansas: A Late 19th-Century Myth," *Kansas History: A Journal of the Central Plains* 1 (Spring 1978): 48–58.

9. Richard J. Hinton, *Irrigation in the United States*, 49th Cong., 2d sess., 1886, S. Doc. 15, serial 2450, 143; "Climate of Kansas," in Kansas State Board of Agriculture, *Quarterly Report* 67 (Topeka: State Printer, June 1948), 34; *Garden City Sentinel*, July 30, 1884, July 23, 1886. For a discussion of the difficulties faced by ditch companies during years of high rainfall, *see* Anne M. Marvin, "The Fertile Domain: Irrigation as Adaptation in the Garden City, Kansas Area, 1880–1910" (Ph.D. diss., University of Kansas, 1985), 74–106.

10. *Lakin Index*, January 3, 1890.

11. Finney County population figures for 1887 and 1891 from Kansas State Board of Agriculture, *Sixth Biennial Report, 1887–1888* (Topeka: State Printer, 1889), pt. 2, 3; ibid., *Eighth Biennial Report, 1891–1891* (1893), 73; *see also* Pfister, *Water Resources and Irrigation*, 58–59; *Lakin Pioneer Democrat*, April 13, 1889; *Garden City Weekly Herald*, April 11, 1889.



In August a formal farmers' club was organized in the northeast corner of Kearny County. Awakened to the need for irrigation by the hot, dry weather, more than fifty farmers attended and discussed how to persuade capitalists to finance a canal through northern Kearny County. By the end of August almost every township in the northern tier had such a farmers' irrigation association. By organizing and working together, farmers hoped to see a ditch project underway by October 1.[12] The consumers were taking the initiative.

Talk of a new ditch proposal caught the ear of at least one local entrepreneur—C.J. Jones of Garden City. In late August 1887 the *Kearney County Coyote*, an upland newspaper, published a letter from Jones proposing a plan for financing and building a ditch in the northern townships. Jones said he could put in the largest canal ever built in the United States for irrigation and manufacturing purposes and could give it such a flow and depth of water that it would wash out its own sediment besides providing water power. He even had an engineer, teams, and machines all ready to go on the project. He would, however, need the cooperation of upland farmers so that it would not be necessary to "scatter our canal all over the country in order to get a little business."[13]

Reaction in the press varied. A Hamilton County newspaper supported early acceptance of the project so that work could begin the next spring. The editor foresaw a general economic lift from the canal construction. It would give the farmers work immediately and better crops in the future. The *Coyote* appealed to its readers' worst fears by repeatedly stating that another bad year would force settlers to move out of the area and that farmers should accept the proposal at once if they hoped to have irrigation by the fol-

12. *Syracuse Sentinel*, August 12, 1887; *Kearney County Advocate* (Lakin), August 20, 1887; *see also* July and August 1887 issues of *Kearney County Coyote* as well as other issues of *Kearney County Advocate* and *Syracuse Sentinel*.

13. *Kearney County Coyote*, August 27, 1887.

Irrigation enthusiasm was a symptom of speculative zeal, which was perhaps most evident in C.J. "Buffalo" Jones (right), one of Garden City's first residents.

Major irrigation ditches and towns in southwest Kansas, ca. 1890 (left).

lowing season.[14] The editor of Lakin's *Kearney County Advocate* took the most cautious attitude. Certainly something must be done to allay the effects of drought, the editor wrote, or "long ere the drought and hot winds can be overcome, our homes will be under mortgage and other people will stop in and reap the benefits of this sowing we are now passing through."[15] The *Advocate*'s editor looked askance at Jones, however, warning farmers to be aware of his history of wheeling and dealing for personal gain. During Jones's campaign for the state legislature in 1886, the *Advocate* had criticized him for being allied with the ditch company owners rather than with the water consumer. The editor reminded readers of this and attacked the ditch project as just another one of Jones's "visionary schemes":

> Jones, in his time, has projected numerous ditches—in fact his statesmanship consists in taking out charters and making a perfect neat work of canals and railroads all over southwestern Kansas, and by thus holding a right of way prevent the building of legitimate enterprises unless his imaginary rights were purchased at a large figure.[16]

The editor also noted that Jones seemed to be in quite a hurry with his ditch proposal, having hired an engineer and machinery before determining the needs and wants of his prospective patrons.

On September 8 Jones met with about one hundred farmers at Chantilly, Kearny County, to present his proposition, and much interest was expressed. A

14. *Syracuse Sentinel*, September 23, October 14, 1887; *Kearney County Coyote*, August 27, September 3, 1887.
15. *Kearney County Advocate*, September 3, 1887.
16. Ibid., October 8, 1887. An example of this sort of action was the Great Western Irrigating Water Power and Manufacturing Company, one of Jones's early ditch enterprises, which claimed in its charter the purpose of irrigating between the Smoky Hill and Arkansas Rivers from the Colorado line east to Sedgwick County, all the lands "that are not already lawful [*sic*] held for irrigating by prior charters." See Corporation Charters, 12:72, Records of the Secretary of State's Office, Library and Archives Division, Kansas State Historical Society; *Kearney County Advocate*, October 23, 1886, September 3, 1887.

general meeting, to be attended by five delegates from each of the eleven township organizations, was announced for September 13.[17]

On September 12 the Suez Irrigating, Water Power and Manufacturing Company filed a charter of incorporation with Jones as one of its directors.[18] Company representatives attended the September 13 farmers' meeting and presented their proposition for a ditch project. The Suez would furnish water at one dollar per inch to farmers in Hamilton, Kearny, and Finney Counties provided that the company received enough pledges before beginning work. Each subscriber would be required to take water for ten years. A committee of one representative from each township attending voted eight to three in favor of the proposition. A minority opposed the plan on the grounds that they did not approve of mortgaging their farms for security in their agreement with the ditch company.[19]

During the ensuing weeks farmers were assured that the ditch was a sure thing, although Jones had had some difficulties securing the right-of-way and signing up sufficient subscribers. Supposedly two hundred names had been sent to the company, and an engineer had already begun a preliminary survey for the ditch. Through a letter to the *Kearney County Coyote*'s editor, Jones reminded Kearny County farmers that they had priority in signing up for the water rights but that Finney County farmers were eager to bid for the canal, which they would get if any rights were left.[20]

Promoters claimed that the projected canal would be capable of watering millions of acres. In addition the project would increase rainfall, remove the uncertainty from farming, and raise land values 20 percent. The canal was to begin near the state line and run northeast through the three-county area. The projected length of the finished ditch varied from one hundred to two hundred miles plus several hundred miles of laterals. Projected completion of the entire canal was set for the spring or early summer of 1888.[21]

It all sounded too good to be true, and indeed the *Advocate*'s dire predictions about the Jones scheme came to pass all too soon. The focus of the Suez project suddenly was shifted east. It was reported that Jones as president of the Suez canal company had signed a contract with Asa T. Soule, financial backer of the mammoth Eureka canal in Gray and Ford Counties east of Garden City. Jones's contract specified that he would construct a huge ditch starting near Hartland in Kearny County, running across Finney County, and joining Soule's Eureka canal farther east. Such a project would almost entirely bypass the upland townships in north Kearny County. On November 29, 1887, the Amazon Irrigating Company, with purposes corresponding to the rumored Jones-Soule project, filed a corporation charter. Among the directors was C.J. Jones.[22]

Newspaper coverage, like the ditch situation, began to get somewhat confused. Although some newspaper accounts still referred to Jones's company as the Suez, others had begun to use the name Amazon. Despite assurances that the Suez, said to be one-and-a-half times the size of the Amazon, would still be built, the doubtful in Kearny County voiced feelings of confusion and betrayal.[23] The editor of the *Kearney County Advocate* accused Jones of leading north Kearny County farmers into thinking that the Suez was a sure thing, then merging the idea into the Amazon project and leaving the farmers with nothing. The *Kearney County Coyote*, however, reported that changes in plan were due to technical difficulties discovered during the survey for the Suez. It had been found that to achieve the projected route the

17. *Kearney County Advocate*, August 20, 27, September 10, 1887; *Syracuse Sentinel*, August 26, September 9, 1887; *Kendall Boomer*, September 7, 21, 1887, *Kearney County Coyote*, September 10, 17, 1887.
18. Corporation Charters 30:45.
19. *Syracuse Sentinel*, September 16, 1887; *Kearney County Coyote*, September 17, 1887.
20. *Kearney County Coyote*, October 15, 1887.
21. Ibid., September 24, October 8, 15, 22, 1887; *Garden City Weekly Herald*, October 13, 1887; *Coolidge Citizen*, October 21, 1887.
22. Corporation Charters 30:383.
23. *Garden City Weekly Herald*, November 3, 1887.

ditch company would have had to place the headgate at least fifty-five miles west of the state line.[24]

Obviously ditch building was an attractive activity for incurable speculators such as C. J. Jones. However, another even more significant aspect to the upland ditch issue remained. The ditch debate was intimately related to county seat politics. This relationship is clearly revealed upon closer examination of Kearny County's political chronology and of the Kearny County newspapers and their geographic locations.

In the spring of 1887 residents of the as-yet-unorganized Kearny County petitioned the governor to proclaim Kearny an independent political entity. In response the governor appointed a census taker in April to determine whether the actual population of the area justified this distinction. Although the area's population had not yet been affected by the drought or economic collapse, local histories indicate that the census process involved considerable manipulation of reality. Somehow sufficient population was recorded, however, for the governor to declare Kearny a county in March 1888. The county seat election was scheduled for the next winter. It is evident that the period of speculative effort on the upland ditch project coincided with the political activity involved in creating the new county and its county seat.

The positions taken by local newspapers on the ditch issue were blatantly tied to their county seat preferences. The *Kearney County Coyote*, one of the most vocal proponents of Jones's Suez project, seemed to exist for the sole purpose of associating itself with the future county seat, although in the first issue the editor righteously declared his fervent desire to "advocate what is right and criticize the wrong."[25] The paper's first home was Kearney, on the uplands eighteen miles north of Hartland. Kearney had been laid out in July 1886 in hopes of becoming the county seat. The Kearney area would of course benefit politically and economically if a ditch were run through the northern townships. As of May 14, 1887, the *Kearney County Coyote* had moved to Chantilly, another north Kearny County town, which the paper declared to be "the Future county seat." About a year later it moved to Omaha, another northern hopeful in the county seat race, and in December 1888 the paper found a home in Hartland. Kearny County officially had been declared an organized county as of March 27, 1888, and Hartland was to win out over Lakin in the county seat election of February 18, 1889, under rather suspicious circumstances. The *Kearney County Advocate*, an opponent of Jones's "schemes," was not free of political biases in the matter. When it began in 1885, the paper had declared one of its purposes to be the establishment of Lakin as county seat. The *Coyote* accused the *Advocate* of opposing the north Kearny County ditch because such an enterprise would reduce Lakin's chances in the county seat race.[26] The *Coyote* made its own interest very clear when it abruptly dropped coverage of irrigation in the spring of 1888 to concentrate on the county seat issue.

Soon after the formation of the Amazon, Jones's canal project with Soule, farmers renewed efforts to secure a ditch for northern Kearny County. Coverage of the issue disappeared abruptly from the newspapers in mid-March 1888. The Suez project in Kearny County was never heard from again.

Increasing attention to the Amazon project in northern Finney County may have been due to the engineering problems of the Suez, but it is apparent from the timing of the switch that Jones's involvement in land speculation and politics also contributed to the change. His interest in north Finney County appears to have been linked directly to the expansion of the Great Eastern company's ditch system in the same area.

24. *Kearney County Coyote*, November 4, 1887; *Kearney County Advocate*, November 26, 1887.
25. *Kearney County Coyote*, January 1, 1887.
26. Ibid., September 24, 1887; *History of Kearny County Kansas*, 101, 103.

Early in the 1880s settlers began to respond to boosterism efforts in southwest Kansas. In 1883 a federal land office opened in Garden City as newcomers came to the area seeking land.

Beginning with the 1887 season, the Great Eastern extended to the vicinity of Hatfield, a community north of Garden City in Township 22, Range 33. No plans were made to run the ditch farther during the 1887 season, and excess water was emptied from the end of the ditch into a natural basin southeast of Hatfield to make a lake and park.[27] By the fall of 1887 farmers in the Hatfield area were expressing interest in extensions of the Great Eastern. They subscribed almost two thousand dollars for water contingent on canal expansion, while farmers in the Knauston area a few miles northwest demonstrated their interest by increasing their list of prospective subscriptions to four thousand dollars. The ditch company worked on expanding and improving its service by enlarging the main ditch and creating new lateral ditches. Unfortunately for the company, north Finney County customers began to complain of water shortages in the early summer of 1888. In late June, at a time when crops were greatly in need of water, the ditch was shut down for a few days for repairs. Farmers in Kearny and western Finney Counties reportedly were ready to file a number of damage suits against the company.[28]

Meanwhile competitive promotion of the Amazon continued. Shaky relations between the Great Eastern and its patrons no doubt contributed to interest in the Amazon as an alternative water source. The *Terry Eye*, located in an area to be served by the Amazon, printed wildly enthusiastic reports on the ditch's construction and credited Jones with its town's future

27. *Syracuse Journal*, July 12, 1889; *Kearney County Advocate*, December 7, 1889; *Garden City Imprint*, December 7, 1889.

28. *Kearney County Advocate*, August 20, September 10, 1887; *Hartland Herald*, September 10, 1887; *Hatfield News*, September 28, 1887. For coverage of work on the canal, *see Hatfield News*, September 28, October 26, November 16, 23, 30, December 4, 1887, February 8, 1888. Regarding damage suits, *see Kearney County Advocate*, June 16, 1888; *Garden City Weekly Herald*, June 28, 1888; *Finney County Democrat* (Garden City), June 30, 1888.

When the unusually high rainfall ended in 1887, C.J. Jones responded to farmers' irrigation needs stating that he had teams and machines ready to build the largest irrigation canal in the United States.

prosperity. Throughout the spring of 1888, Jones continued meeting with area farmers and signing them on as subscribers to the project.[29]

Jones and the Amazon were not without opponents, however. During June 1888 the *Terry Eye* printed a letter to the editor that was highly critical of Jones's intentions and motives. The writer did not trust Jones to keep the ditch in repair, suspecting that instead he would dump the projects in the laps of the stockholders—that is, the farmers who had subscribed for water. The writer expressed resentment at Jones's pressure tactics and the assertion that farmers must have irrigation immediately, no matter what the cost, or accept the fact that they would have to leave the county. Also, Jones's figures as to the money he would have to raise to cover construction costs seemed doubtful.[30] The *Garden City Weekly Herald* responded immediately, accusing the other papers of printing false letters ostensibly written by farmers against the Amazon. If Jones were making such a killing on the Amazon, the newspaper asked, why wasn't everyone out promoting ditches? The *Weekly Herald* also printed a letter attributed to a reader in Terry saying that ditches were a necessity, and it did not matter who built them. It was not true, anyway, that farmers would be asked to mortgage their farms to the ditch company; and besides, "the farmers of north Finney know that C.J. Jones is the only man that has ever done anything for the people." The *Weekly Herald* further asserted that a conspiracy was afoot to discredit Jones in the Amazon matter so that he would not get the Republican nomination for Finney County representative to the state legislature.[31]

29. *Terry Eye*, November 17, 24, 1887; *Hartland Herald*, December 3, 1887; *Kearney County Advocate*, March 17, 1888; *Terry Eye*, March 22, April 26, May 31, June 28, 1888.

30. *Terry Eye*, June 7, 1888, reprinted in *Weekly Sentinel and Cultivator* (Garden City), June 13, 1888, and *Kearney County Advocate*, June 30, 1888.

31. *Garden City Weekly Herald*, June 14, 1888.

North Finney County residents had long been well aware of the ongoing political struggle, as indicated by stories in the *Terry Eye* during April and May 1888. When Jones and others of the Amazon had failed to appear at a meeting with 150 farmers at Terry, the *Eye* had declared that "this fooling with the farmers must be stopped. The next time any man wants an audience in Terry he will not get it; bear this in mind, ye office seeking nabobs of Boomadom—Garden City."[32] The *Eye* noted that in May the battle already was beginning between the *Garden City Weekly Herald*, a pro-Jones paper, and the Garden City *Weekly Sentinel and Cultivator*, which backed his opponent in the race. The *Weekly Herald* launched an attack on J.W. Gregory, editor of the *Weekly Sentinel and Cultivator*, implying that he had been involved with ballot box stuffing in 1886 when Jones had lost to H.P. Myton in the race for a seat in the legislature.

Gregory responded that although everyone knew the necessity of irrigation, farmers in northern Finney, Kearny, and Hamilton Counties should not be swindled into mortgaging their land to support a pipe dream. In response to the *Weekly Herald*'s coverage of the matter, Gregory wrote:

> Wanted—two or three men who can write a column or two of something they know nothing about and will never be able to learn, to be headed "defense of a Irrigating Ditch Grab," and signed "Farmer," "Constant Reader," or "Citizen." Grammer no object. No honest man need apply. Call on or address the Evening Gutter Snipe.[33]

The *Weekly Herald* ran a letter from a Hatfield farmer who asserted that J.W. Gregory wanted both Myton and Jones out of the 1888 political race so that Gregory could become a compromise candidate. Because of Gregory's attacks on Jones, the writer stated, farmers had not signed contracts with Jones when they should have. This had led to a lack of certainty of water for the next season, which would force many to leave their homesteads and find work elsewhere. The *Weekly Herald* asserted that Gregory's opposition to the Amazon was not just a private political wrangle but an issue that could lead to the ruin of Finney County.[34]

The *Weekly Herald* backed up its assertions by stating that while farmers in Finney County were involving themselves in a political argument, Scott County farmers were subscribing freely to the Amazon project. This may or may not have been true, for less than a month later the *Terry Eye* noted that Scott County farmers were not happy with the contract Jones was offering.[35]

Amidst the political and personal feuding, the problem remained of how farmers could obtain water in time to save their crops and allow them to stay on the land. The *Hatfield News* declared in the summer of 1888 that irrigation was being performed in a manner entirely unsuitable to the people. The paper acknowledged that "no one questions the value of a country with a good system honestly and carefully managed, but they cannot wait always for it to be brought about," and it advocated a "united and persistent effort of the people to secure a thorough system of irrigation in this part of the country wherever it can be had."[36] Most citizens shared a feeling that time was of the essence in obtaining irrigation for north Finney County. A letter to the editor of the *Garden City Weekly Herald* summed up what surely was the attitude of many farmers in the area: "What we want," the writer stated, "is less politics and more water."[37]

Complaints of mismanagement and poor water supply continued, and the situation in north Finney County changed little. During the spring of 1889 many farmers were reported to be planting crops far-

32. *Terry Eye*, April 12, 1888; *see also* ibid., April 5, 12, May 3, 1888.
33. *Weekly Sentinel and Cultivator*, July 18, 1888.
34. *Garden City Weekly Herald*, July 19, August 16, 1888.
35. Ibid., June 14, 21, 1888; *Terry Eye*, July 12, 1888.
36. *Hatfield News*, June 13, 1888.
37. *Garden City Weekly Herald*, July 26, 1888; *Terry Eye*, July 19, 1888.

ther up the ditches, where they could be sure of the water supply. Promises of water from the Great Eastern and the Amazon during the preceding two years had not been realized, and the farmers were not prepared to live on hope again.[38]

The Great Eastern continued to have trouble with water supply into northern Finney County, and complaints from patrons continued. By the end of 1889 the fate of the ditch seemed uncertain. Rumors flew about changes in ditch ownership, including the story that Asa Soule, of Eureka ditch fame, had bought the company.[39]

For awhile construction of the Amazon appeared to be proceeding well. In early December reports indicated that eighty miles of the ditch had been finished. Problems soon arose, however. The Garden City *Weekly Sentinel* asserted that parts of the ditch ran uphill and that grading and construction generally had been shoddy and inadequate. At the end of May 1889 the ditch broke and flooded parts of the town of Lakin. Later in the season the river rose, rushed into the wide-open headgates, and washed out a newly constructed flume.[40]

By early June 1889 Jones was claiming that he had long ago sold out to an English syndicate, as had been rumored during the preceding fall. Editor Gregory responded to this reported sale to English capitalists by stating that "the only 'English' capitalists we have heard of as dabbling in our ditches are Kansas City speculators."[41] The *Weekly Sentinel* accused Jones and his business associates of buying out landowners along the ditch. In November 1889 the *Garden City Imprint* abandoned its noncritical attitude toward the Amazon and printed similar accusations of fraud and land speculation. The *Kearney County Advocate* joined in the condemnation of the ditch owners. Finally in June 1891 Amazon water reached the ditch in the Terry area. The *Imprint* declared that it looked as though north Finney County might produce a good crop for the first time in five years.[42]

The precedents of speculative development established during the "boom" had continued to govern irrigation operations during the lean years of the late 1880s. Various economic and political schemes were intermixed with irrigation projects, thus diluting corporate response to what many farmers viewed as a desperate situation. The disappointments of the late 1880s motivated southwest Kansans to seek better ways of financing, managing, and regulating irrigation works. The debate intensified over who should provide the necessary capital for larger irrigation works—associations of farmers, private corporations, the states, or the federal government. Increased discussion ensued regarding the need for federal aid to irrigation and for state legislation governing irrigation.

Disgust with both politics and corporations is evident in newspaper coverage of the north Finney County situation. The Garden City *Weekly Sentinel and Cultivator* noted that for years the farmers had been dependent on the ditch companies, which had been given a fair trial and had proven untrustworthy. Farmers now should take steps to put the canals under the control of those who used them.[43]

Two different groups of farmers in the greater Hatfield area took up the cause. The *Hatfield News* noted in mid-July that sixteen farmers in the area six miles south of Hatfield had formed the Farmers' Kansas Ditch Company to build and operate a new irrigating ditch between the Great Eastern and the Illinois (Garden City) ditches. Shortly thereafter, another group of farmers organized the Peoples Irrigation and Water Supply Company to serve the Knaus-

38. *Hatfield News*, March 30, 1889.
39. *Garden City Imprint*, May 25, June 22, July 20, 1889; *Kearney County Advocate*, July 20, October 5, 1889; *Kearney County Coyote*, October 12, 26, 1889; *Garden City Imprint*, November 6, 1889.
40. *Garden City Weekly Herald*, December 6, 1888; *Weekly Sentinel*, May 18, June 1, 1889; *Kearney County Coyote*, June 1, 8, 1889; *Kearney County Advocate*, October 26, 1889.
41. *Weekly Sentinel*, June 1, 22, 1889; *Garden City Weekly Herald*, August 9, 23, 30, October 4, 1888; *Terry Eye*, October 4, 1888.
42. *Weekly Sentinel*, May 18, 1889; *Garden City Imprint*, November 23, 1889; *Kearney County Advocate*, November 30, 1889; *Garden City Imprint*, June 6, 1891.
43. *Weekly Sentinel and Cultivator*, July 11, 1888.

Construction of the mammoth Eureka irrigation canal in Ford County (left).

During the dry seasons of 1887–1888 northern Finney County farmers relied on the Great Eastern irrigation ditch, which had numerous problems supplying the necessary water. Shown at right are the headgates of the Great Eastern ditch near Garden City.

ton-Hatfield-Terry area, filing a charter on July 31, 1888.[44] Financing or enthusiasm or both were not sufficient, however, and the newspaper coverage of these projects soon ceased.

Farmers also had taken action to pressure the existing ditch companies into providing better service. In June 1888 residents of northern Finney County had decided to "complete a permanent organization the object of which will be to take a united effort in a direction that will lead to a better success in irrigation, also to advance farmers' interest generally." The official name was the Farmers Protective Alliance. The organization quickly gained interest in its efforts to straighten out the ditch situation. Seventy members attended the first meeting.[45] The alliance apparently was able to exert some pressure on both the Amazon and the Great Eastern. Due to its criticisms of the Amazon project, the alliance was accused of trying to injure Jones politically. The organization also was able to pressure the Great Eastern to improve service, winning promises from management that specific steps would be taken to improve water supply and regulate its distribution.[46]

In Kansas as well as throughout the semiarid West came ever-increasing appeals for federal assistance to develop irrigation facilities. Coverage of the issue in Garden City-area newspapers reflected a larger debate about private enterprise versus government action. Some urged more aggressive encouragement of private investment, since government help, if offered, would be too slow.[47] Some believed that a sure supply of water could never be developed in time to help suffering settlers unless the government aided the effort. Pri-

44. *Hatfield News*, June 27, July 18, 1888. Presumably this was the group officially known as the Farmers Irrigating Canal Company, chartered July 12, 1888, to irrigate lands in Kearny and Finney Counties. *See* Corporation Charters, 32:286, 34:87; *Hatfield News*, April 11, May 9, 1888.

45. *Hatfield News*, June 13, 29, 27, July 4, 1888. The Farmers Protective Alliance apparently was involved with the Peoples Ditch project. The *Hatfield News*, July 25, 1888, noted that the group was getting encouragement on its ditch project. Since the alliance was active west of Hatfield, where the Peoples Ditch was to run, one may assume that the *News*'s reference to the alliance ditch meant the Peoples ditch rather than the Farmers ditch, which was farther south.

46. *Hatfield News*, August 22, 1888; *Weekly Sentinel and Cultivator*, July 25, August 23, 1888.

47. *Garden City Imprint*, August 31, 1889; *see also* Fite, *The Farmers' Frontier* 1865–1900, 187.

vate development, it was said, would be slow, wasteful, and unsystematic. Private investors would overdevelop some areas and ignore others while taking "the cream of the benefits to be derived and leaving only skim milk for the people."[48] Those farming in a newly settled area could not afford to wait five or ten years for such uncertain rewards. The government was urged to take action immediately to speed irrigation development.

Increasing requests for federal aid to irrigation led to the formation of a U.S. Senate Committee on the Irrigation and Reclamation of Arid Lands. Committee members took a fact-finding tour through the West in the fall of 1889, and their short stay in the Garden City vicinity stimulated proposals for improving the water supply and funding irrigation systems. The committee's final recommendations, however, led only to federal funding of investigations into the groundwater supply.[49]

Some citizens of southwest Kansas hoped that state legislation could produce a workable irrigation system, although others thought that such action would take too long to be of practical effect. Proposals for legislation focused on how to finance and establish irrigation facilities.

The idea of bonding irrigation works had been discussed during the late 1880s, but at the time state law did not allow township bonding of such projects. Some opposed bonding on the grounds that such financing would result in an unfair distribution of cost since it would tax those who would not benefit directly from the ditches. One writer cited the precedent of a county road system in Indiana to support the suggestion that only the lands benefiting directly from irrigation should be taxed to finance the bonds.[50]

Another suggested alternative for financing ditches was to provide for the formation of irrigation districts. Under such a plan the county could issue bonds to finance the purchase of ditches, which

48. *Weekly Sentinel*, September 14, October 5, 1889.
49. *Kearney County Advocate*, December 7, 1889; Alfred R. Golze, *Reclamation in the United States* (New York: McGraw-Hill, 1952), 22–23.
50. *Garden City Weekly Herald*, July 19, 1888; *Weekly Sentinel and Cultivator*, July 11, 1888. On township bonding, *see Hatfield News*, August 22, 1888; for farmers' discussion of the bonding issue, *see Weekly Sentinel*, September 6, 15, 1888.

Like the Eureka Canal, photographed here in ca. 1890, other major canals in the Finney-Kearny County area utilized water from the Arkansas River in their early, and vain, attempts to irrigate southwest Kansas.

would then be managed by a county irrigation board. Taxes would be levied to finance the bonds and keep the ditches in repair.[51] In the wake of rivalries among the Amazon, the Great Eastern, and farmer-initiated ditch companies in northern Finney County, the *Hatfield News* advocated forming a district with the purpose of building or purchasing a ditch to secure a satisfactory water supply for the area. At the newspaper's urging a petition circulated advocating that an irrigation district bill be sent to the legislature. The district system, the *News* declared, was the only way irrigation ever had been successfully conducted, as such a system was directly controlled by law and government, as it ought to be. The *News* urged that bonds issued by the district should be financed by taxing all irrigable lands. This would force nonresident speculators, who held extensive acreage, to give their share in developing the country, so that the burden would not fall solely on farmers and other residents. The idea of taxing irrigable acres, whether or not cultivated, also had been suggested as a component of fair legislation by the Farmers Protective Alliance.[52]

Debate continued over whether development of irrigation works would be better left to private capital. The *Weekly Sentinel* appeared to back off the bond idea in late 1889 when it insisted that irrigation works were a sound investment that paid good returns to capitalists. The *Garden City Imprint*, however, continued to advise that the ownership of ditches ought to be turned over to the owners of the land irrigated from those ditches. A relatively comprehensive state irrigation law was passed in 1891, including regulatory measures and provision for financing irrigation works through bonds issued by locally operated irrigation districts.[53]

The people of southwest Kansas did not, however, follow through on the district plan. Several factors contributed to this situation. The market for district bonds remained poor due partly to lack of faith in their stability and partly to generally bad financial

51. *Garden City Weekly Herald*, July 19, 1888.

52. *Garden City Sentinel*, February 16, 1887.

53. *Hatfield News*, January 19, 26, February 9, 1889; *Weekly Sentinel and Cultivator*, July 25, 1888; *Weekly Sentinel*, November 9, 1889; Kansas *Laws* (1891), ch. 133.