Mastering the Kaw

The Bowersock Dam and the Development of Lawrence Industry

by Brian Black

After the passing of Justin DeWitt Bowersock on October 27, 1922, Prof. W. C. Stevens of the University of Kansas took the opportunity in his eulogy to talk about life in early Lawrence, Kansas. His recollections quickly came to rest on a very specific portion of Lawrence history—the Kansas River, or Kaw. "To harness the old river," he explained,

> and turn its vagrant course to one of purpose and beneficent accomplishment was a conception worthy of the human spirit. Whether there were men here who would stake their capital and their reputation for conservative, judicial business sense, and their peace of mind, on an adventure so uncertain; and, risking all this, would have the genius to see what should be done, and the stamina to persist in the face of disaster, only the future could disclose.[1]

The future indeed did disclose a great deal about J. D. Bowersock, his heirs, and the town of Lawrence through their interactions with the Kaw.

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1. *Lawrence Daily Journal-World,* October 28, 1922.

Mastering the Kansas River in Lawrence became the task of J. D. Bowersock in the 1870s. In this 1886 photo, the mighty Kaw exits the power station housed beneath the Douglas County Mill.

The present Bowersock Dam and Power Building overlooks the Kansas River from the south bank in Lawrence. It is powered by water diverted by the Bowersock Dam, a partial dam consisting of a series of doors that are stabilized from behind by two-by-fours set atop a constructed elevation spanning the river's width. The construction of the dam in 1873 was the first step in making Lawrence a progressive, industrial town unique from the largely agricultural landscape of Kansas. Power generation at the Lawrence dam began as only wheels that drove the town's main flour mill but soon spread through the town by a webbing of elevated cables. Later this power was dispersed more efficiently as electricity. The dam at Lawrence was the only attempt to breach the Kaw that proved successful in the long-term, and throughout the last quarter of the nineteenth century it delineated Lawrence from other small cities in the region.

The occupants of the industrial age in which the Bowersock Dam was constructed viewed the landscape primarily as a resource to be harvested. As historian Theodore Steinberg wrote, "If industrial transformation affected such aspects of social life as class, gender, and family relations, it also altered human relations with the natural world."[2] The Bowersock Dam and its surrounding buildings is material culture that illustrates changes in the relationship between man and nature. The illustration is particularly useful because of the Bowersock Dam's persistence. Whereas most similar dams on the East Coast ceased service when mills and factories converted to other power sources, the dam at Lawrence was modernized to generate electricity.[3]

The construction of the dam transformed the Kaw into what historian William Cronon has called "second nature." This is a landscape that has been "improved toward human ends, gradually [emerging] atop the original landscape that nature—'first nature' had created as such an inconvenient jumble."[4] An eternal series of "improvements" upon first nature is responsible for the persistence of American society. The Bowersock Dam is no different from East Coast examples except that it is found in the heart of the United States and has remained in operation for more than a century. Its entire history is a tale of second nature.

Through lithographs, photographs, town maps, and some firsthand descriptions, this article explores the changing structures that have put the waters of the Kaw to work and examines how their success has distinguished the city of Lawrence. In so doing, this analysis assists in explaining industrialization's relationship to the natural world, and how this is exemplified in this eastern Kansas town.

In 1835, well before Lawrence was founded, French observer Alexis de Tocqueville wrote, "The principles of New England spread at first to neighboring states; they then passed successively to more distant ones; they now extend their influence . . . over the whole American world."[5] Founded by settlers from Massachusetts, Lawrence exemplified New England meeting the prairie. Damming the Kaw expressed progressive ideals that had been utilized throughout New England and the East Coast, but only infrequently implemented west of the Mississippi. Included among these ideals was the faith that the natural world could and should be mastered, tamed, or overcome. This belief would reach even greater prominence as it moved from New England to the unsettled stretches west of the Mississippi. Historian Patricia Nelson Limerick wrote, "As a depository of enormous hopes for progress, the American West may well be the best place in which to observe the complex and contradictory outcome of that faith [in progress]."[6]

The Bowersock Dam stood as an icon of progress for Lawrence and much of Kansas. Guiding the dam and power company to prominence was Justin

2. Theodore Steinberg, *Nature Incorporated: Industrialization and the Waters of New England* (New York: Cambridge University Press, 1991), 11. *See also* Louis C. Hunter, *A History of Industrial Power in the United States, 1780-1930, Volume One: Waterpower in the Century of the Steam Engine* (Charlottesville: University Press of Virginia, 1979), 1.

3. Steinberg, *Nature Incorporated*, 270-71.

4. William Cronon, *Nature's Metropolis* (New York: W. W. Norton and Co., 1991), 56.

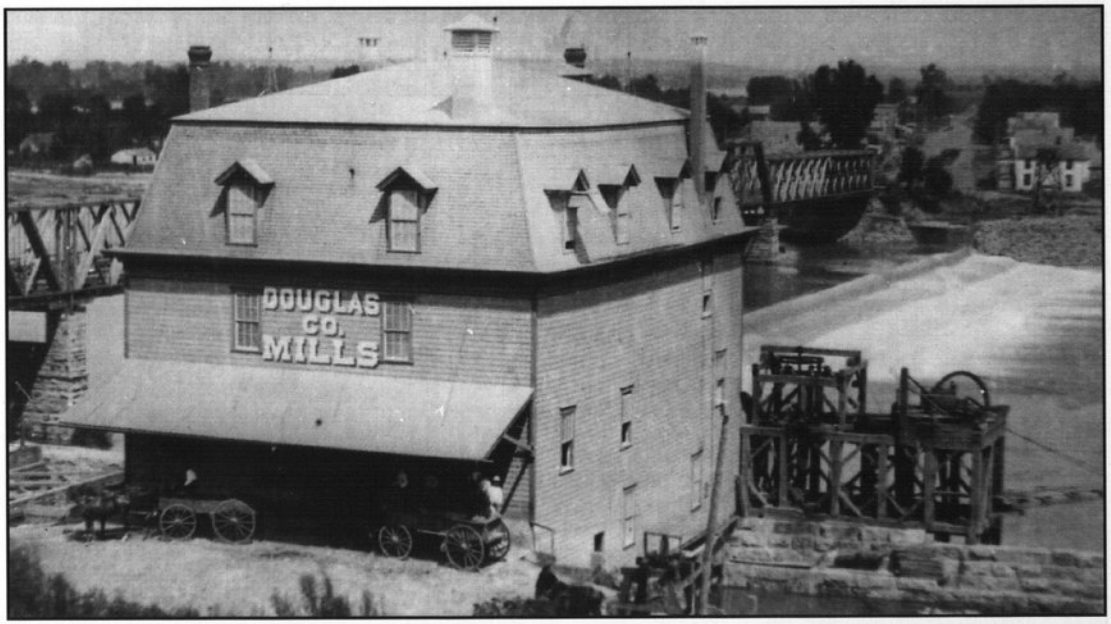
5. Alexis de Tocqueville, *Democracy in America* (Garden City, N.Y.: Doubleday, 1969), 35.

6. Patricia Nelson Limerick, *The Legacy of Conquest* (New York: W. W. Norton and Co., 1987), 30.

DeWitt Bowersock, a highly successful entrepreneur from Iowa. In the aforementioned eulogy, W. C. Stevens compared Bowersock's relationship with the river to a battle between a valiant knight who fought for the success of humanity and the evil nature that attempted to thwart his progress. Stevens described Bowersock's greatest foe as "the ruthless forces of nature." Struggle often accompanies attempts to make first nature into a human product of second nature, and the Kaw presented a persistent foil to these attempts. By confronting each of nature's challenges during a fifty-year relationship, Bowersock had, in Stevens' words, become the "Master of the River."[7]

Inherent in the term "master" and in the compulsion to dam the Kaw is the theory that human progress justifies the manipulation of nature. Much of this terminology seems to foreshadow the power structure that environmental historian Donald Worster and others have observed in the arid West where control of water led directly to political and economic clout.[8] But the Bowersock Dam is no Hoover, Glen Canyon, or Grand Coulee. Instead it resembles facilities found in the small industrial communities of Massachusetts, New York, and Pennsylvania.

The power drawn from rivers is possibly more a borrowed natural resource than any other—the natural



Built on the south bank of the Kansas River, the Douglas County Mill building, photographed here in 1886, housed all the dam works.

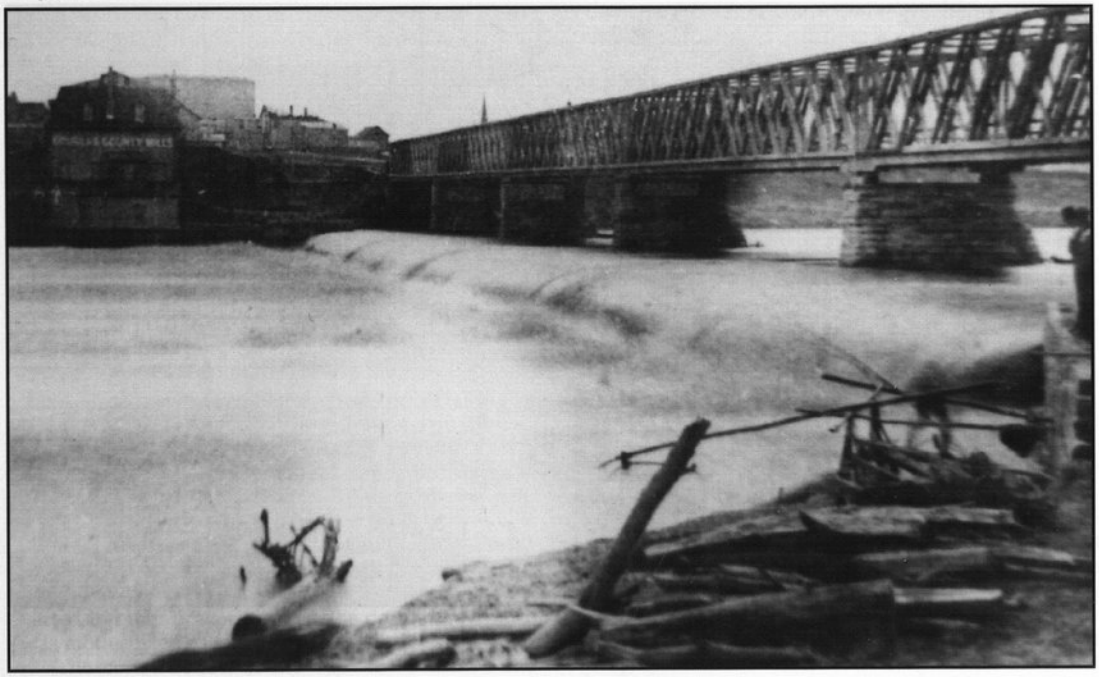
7. *Lawrence Daily Journal-World*, October 28, 1922.

8. Donald Worster, *Rivers of Empire* (New York: Pantheon Books, 1985), 56.

object from which the power is taken remains after it is used. Particularly with a partial dam such as Bowersock, the river takes on a personality: it creates power and prosperity, but remains capable of stripping it all away. As the people of Lawrence learned, the Bowersock Dam never mastered or completely tamed the Kaw. Instead it borrowed the river's motive force and intermittently fell prey to its flood waters. It did, however, undeniably recast the Kaw, ahead of and below the dam, and its watershed as a human product—as second nature.

One of the earliest changes that industrialization made in human perceptions of nature was the commodification of the sources of power that would fuel factories and businesses. This process takes place when a pre-existing object's value is enhanced by cultural change. As Americans began to value resources such as timber, coal, and petroleum for the industries these fuels could make possible, the American view of the landscape changed. Resources made land values include new considerations, and thereby span an entirely new economic range. Water was one of the most economically feasible energy sources in nineteenth-century industry.

With waterpower as their lifeblood, industrial communities sprang up in the Northeast, particularly during the early to mid-1800s. Most communities west of the Mississippi initially were structured with a more



In this 1880 photo the dam appears as a barrage that creates a waterfall during high water levels, but it halts the river's flow during normal levels.

limited economic agenda of farming and getting the produce to market. Still, waterpower played a crucial role, even if it would be on a smaller scale than its eastern counterparts. Historians have noted that some pioneers held the gristmill "a greater necessity than a store, a courthouse or a professional physician." Of early Kansas one historian wrote, the "two great essentials to the pioneer settler [were] flour and building material," both demanding water-powered mills.[9]

The settlers of Lawrence chose to site their town on the Kansas River in the early 1850s because it provided a transportation link to other cities, a ready supply of water, and a relatively abundant supply of wood. However, by the 1860s many townspeople had begun to think in terms of Lawrence's long-term development. Powering the small-scale industries created by the town's founders would necessitate a great supply of energy—more energy than could be offered by the large windmill erected just outside of town.

The search for raw sources of energy in the area proved fruitless. After failing to uncover coal or natural gas in the area surrounding Lawrence, some community leaders began to seriously consider developing mills such as those familiar in the eastern towns they had left behind. By 1872 a full-fledged movement was afoot to dam the Kaw: "We want manufactures," explained an 1872 newspaper editorial, "there are two ways of getting them, and we have them both within our reach—water and steam. . . . It will be a motive power not possessed by any other city in Kansas."[10]

Engineers advised that the dam be built six miles outside of Lawrence. However, Orlando Darling, who owned the Delaware Mills (which was already producing flour), the Kaw's ferry service, and much of the levee land surrounding the river, had begun outlining his own dam project. His plan called for an eight-foot dam that would span the Kaw just below the bridge, which had been built in 1863 and which had detracted considerably from his ferry business.[11]

On September 23, 1872, Darling signed an agreement with the town to construct the dam himself. He then combined his interests with those of other individuals to form the Lawrence Land and Water Tower Company. While the agreement made the company sole owner of the levee property and the dam-to-be, it also held the group liable for the damage caused if the dam forced the Kaw over its banks. The only other limitation in the agreement was that Darling could not charge "more than 25 percent of the cost of steam power" for the energy created by the free-flowing river.

This agreement called for Darling to spend up to $200,000 on the project over six years, $50,000 of it within the first two years of construction. The town consented to give him $6,000 annually and to buy power enough to operate the town's waterworks (which did not yet exist).[12]

The town closely followed the dam's construction. At first, many townspeople viewed the dam with cynicism. At this point the dam was more a project of its developers than a shared undertaking for Lawrence's progress. In March 1873 the *Republican Daily Journal* printed a story entitled "Will the Dam Stand." Of course it will, the writer assured his readers. It is only "a matter of mere engineering skill. . . . We have no doubt that Mr. Darling will take every precaution."[13] The article went on to discuss the coverage of the dam's construction in *Leffel's Illustrated Mechanical News*, and it pointed out how impressed these technical people had been with the construction process.

Such coverage assuaged much of the town's trepidation. Only three days later, the same newspaper publicized the dam's booster role to spur an influx of eastern migrants and investment when it wrote that "vigorous efforts have been made to bring the value

9. Otto A. Rothert, *A History of Muhlenberg County, Kentucky* (Louisville: J. P. Morton and Co., 1913), 121; Leslie A. Fritz, "The Development of the Milling Industry in Kansas," *Kansas Historical Collections, 1911-1912* 12 (1912): 55.

10. *Lawrence Weekly Tribune*, March 7, 1872.

11. This information is mentioned in various sources. For an extended discussion of these developments, *see* Kenneth A. Middleton, *The Industrial History of a Midwestern Town* (Lawrence: Kansas Studies in Business, 1941), 34-48.

12. All the data concerning the dam agreement is taken from Dam Contract, Council Chamber Record Book C, September 23, 1872, p. 91-97, Office of the City Clerk, Lawrence.

13. *Republican Daily Journal*, Lawrence, March 16, 1873.

of the waterpower to the attention of Eastern manufactures."[14] Reports soon noted that Kansas City was constructing its first waterworks operation, and the *Republican Daily Journal* wasted no time in pointing out how the dam at Lawrence would provide a system for a waterworks that would cost only a fraction of the expense of the Kansas City project.[15] On March 25, 1873, the *Republican Daily Journal* published a letter from R. S. Elliott in Bosland, Kansas. "Dam it!" Elliott began, expressing his frustration with the farmers who questioned the worthiness of the dam project. Of the Darling project he predicted:

> you will convert Lawrence into a manufacturing town, and the dam will do more for the farmers of Douglas county than all the resolutions they can pass in a lifetime. It will aid to collect in Lawrence people enough to consume all the small products of the farms, and a great deal of the greater crops also.[16]

As the paper's coverage continued, one of its writers announced, "The time for sneering at 'Darling's dam' has gone by. People begin to see that it is going to be a success and a big thing."[17] Throughout the remainder of the year, advertisements claimed Lawrence to be the best flour-milling seat in the West. In essence the dam was making Lawrence residents view their town as a progressive extension of eastern capitalism.

Not every town in the Midwest had the natural resources necessary to imitate eastern city and town development. Newspaper coverage soon began to separate Lawrence from other towns in the region for just this reason. The basic process of establishing towns on the frontier, explained these newspapers, was one of great immediate growth followed by a downturn when towns were unable to organize themselves for permanent success. In their estimation, Lawrence was one of the few that followed a standard model of American progress and was in fact moving to the next stage:

> While other cities have been talking about the necessity of manufacturies, Lawrence has gone to work in the matter. She has decided that the here to fore idle stream which flows through her borders shall put its shoulder to the wheel and go to work for the town . . . [it is] a road which takes Lawrence out of the woods. . . . Henceforth we are to take money in, and not pay it out.[18]

It is interesting to note the choice of words describing the Kaw as "here to fore idle." The standard meaning of "idle" could not possibly be applicable to the flowing Kaw; instead, "idle" delineated how the natural resource had served the community. "Idle" meant economically useless, but the river would no longer be idle when it brought money into the community. As Limerick has suggested, in this idea of progress, a natural resource is useful only when serving human needs. By recasting the value of the river that flowed past Lawrence, the dam had changed the town's conception of itself and its future.

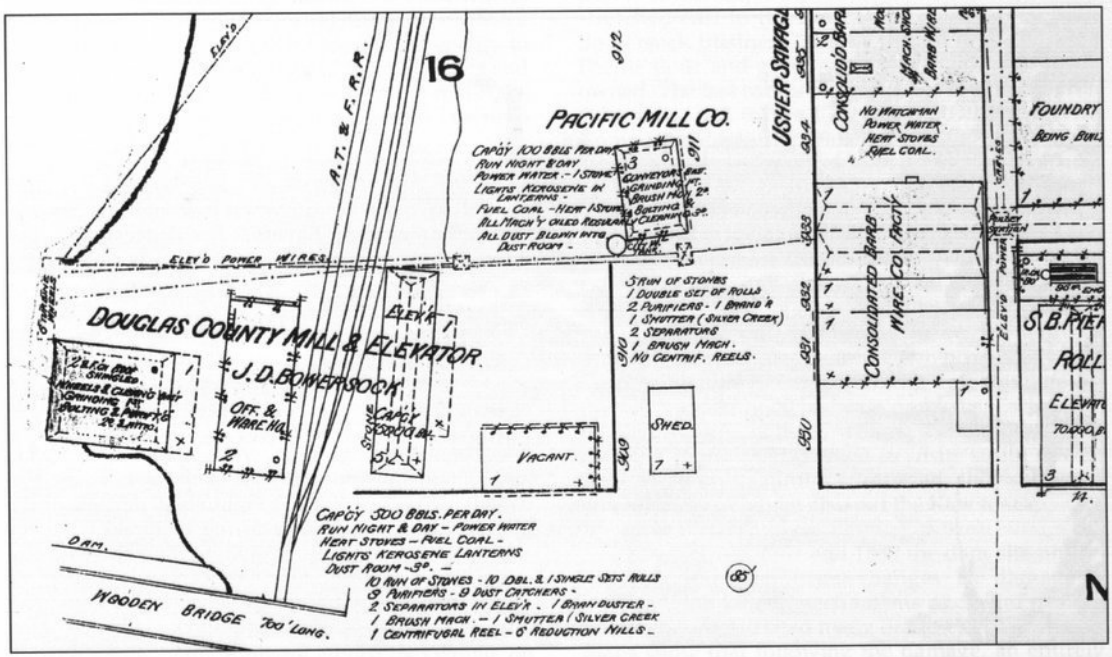
Prosperity, however, did not arrive in Lawrence without problems. The project demanded great physical labor to succeed, and weather greatly restricted the work. In December 1873 an ice gorge that had formed on the river above the partially-constructed dam gave way and demolished the dam's northern flume, carrying with it a significant portion of the dam. With this failure, Darling resigned from the Land and Water Tower Company. The dam was completed nearly a year later, in November 1874, without him.[19] The original structure was six hundred feet long, with a rock foundation on the south side of the river and a log foundation on the north. The mill building was constructed on the southern river bank. At this point, the land jutted outward creating a natural path for the constructed flume opening that would carry the water beneath the mill building.

The mill building was designed to serve as the region's first central-station power distributor, which would transfer the Kaw's motive force to other businesses. Contracts were in place for the twenty-five hundred horsepower that the mill's spinning wheels would generate, and above-ground

14. Ibid., March 19, 1873.
15. Ibid., March 20, 1873.
16. Ibid., March 25, 1873.
17. Ibid., April 5, 1873.
18. Ibid., April 20, 1873.
19. Alfred T. Andreas, *History of the State of Kansas*, 2 vols. (Chicago: A. T. Andreas, 1883), 1: 326-27.

cables had been strung throughout a few blocks of the town to transfer the wheel's spinning motion to each site.[20] These spinning cables remained taut by periodically passing through pulley stations. Pulleys then transferred the motion to another cable until the motive force reached the contracted user. Through this network, Lawrence had arrived at its vision of progress. A local newspaper described the day:

> LAWRENCE A MANUFACTURING CITY:
> The Dam Completed
> On Tuesday Morning at half past eight Mr. Zimmerman hoisted the last stone to place on the dam coping and the structure was practically complete. . . . Lawrence may now plume itself on being a manufacturing city indeed. It cannot be long until capital will be determined hither . . . and we look to see mill after mill erected until every foot pound of power is utilized.[21]



A portion of the earliest Sanborn Fire Insurance Map for Lawrence (1883) notes the waterworks operations inside the mill building.

Despite the existing contracts for its power, the dam proved to be only a shadow of what Lawrence citizens had hoped. It washed out in the spring, and in April 1876 an entire section of the dam was permanently destroyed. The structure could not be fully repaired until its ownership changed. In 1878 the Lawrence Land and Water Power Company went into

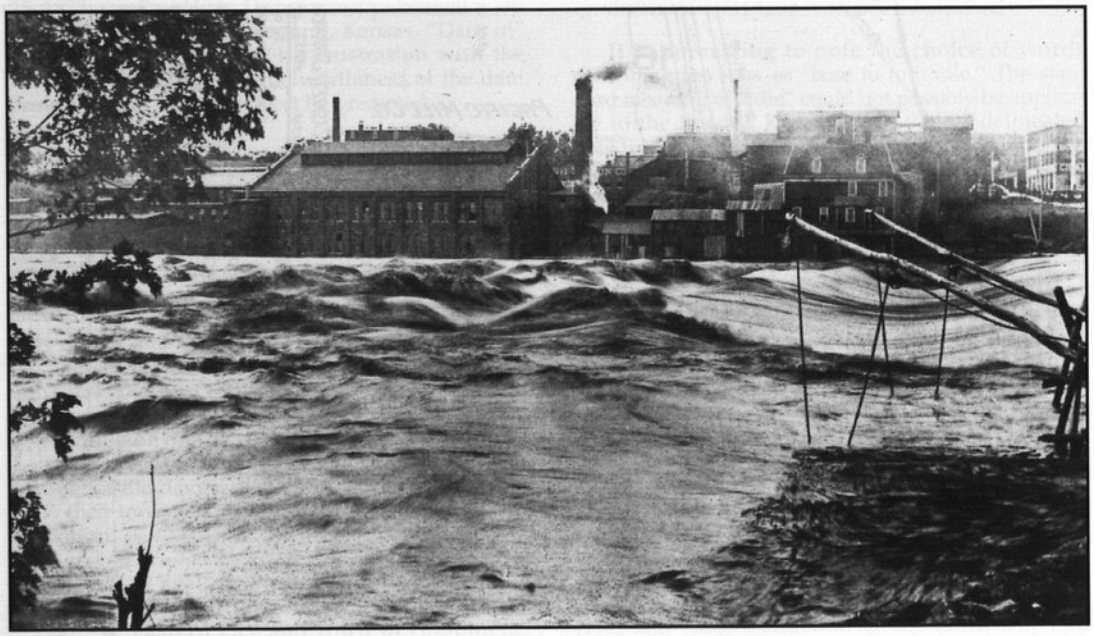
20. For a more lengthy description, see Middleton, *The Industrial History of a Midwestern Town*, 44-45.

21. *Lawrence Weekly Tribune*, November 12, 1874.

receivership, and through inheritance and foreclosure, J. D. Bowersock became its sole owner. The job ahead of him would be to shore up both the structure of the dam and the townspeople's confidence in it.

Photographs taken in 1880, just after Bowersock's improvements had been completed, provide the earliest visual record of the mill and dam. In these photos the dam appears as a barrage, or an elevation in the river, that creates a waterfall during high water levels, but it absolutely halts the river's flow during normal levels. To the south bank, a stone wall channels a portion of the river into a dam run, which has been carved into the existing land beneath the very square Douglas County Mill building, which housed all the dam works.

More details are revealed by an 1886 photo in which the water is seen streaming through a race below the building and pushing the wooden wheels beneath the mill. The foaming water then passes into an exposed area encased in local limestone at the rear of the dam. The iron works above the flume area control rear release gates. When the 1880 structure ran normally, the water exited from the flume and joined again with the flowing river. Gates in the opening of the original race are also present in the photo. It is unclear why the 1860 mill at this point would have had gates at each end; possibly the rear gates seen in the 1886 photo were original and the front gates were added later. If this were the case, the change was no doubt made due to a major



During the 1903 flood, the Kansas River struck the Bowersock Dam with devastating force. This Lawrence photo was taken looking south, below the mill dam.

design flaw: gates only in the rear would offer one explanation for the massive damage sustained by the structure in a series of floods.

No photos remain of the inside of the mill building, but the original wheels were most likely tub style and not vertical.[22] The 1883 *Sanborn Fire Insurance Maps* show six wheels in operation.[23] As these wheels were driven, gears transferred the water's force through a series of axles that brought the energy to the millstones on the main floor of the mill. Gears and leather belts transmitted this power to the millstone, often making the milling area a dangerous labyrinth of moving parts.

The simplicity of waterpower made it a potential resource for many communities. Waterpower, writes historian Louis Hunter, "represented mechanical power in its most 'democratic,' that is to say, egalitarian, form."[24] However, the 1880 U.S. Census listed Minnesota and Kansas as the only two states west of the Mississippi using waterpower: Minnesota used two sites, but Kansas had developed only one. If the use of waterpower indeed earmarked a progressive community, Lawrence residents were obviously justified in their self-promotion. But the 1880 census reported that only 20 percent of the available power was being used at the Bowersock Mill. This rate of efficiency ranked in the bottom third of the thirteen states using waterpower.[25] To improve on his undertaking, Bowersock needed to increase the efficiency of the mill while also expanding the market for power.

A lithograph entitled *Bird's Eye View of Lawrence, Kansas, 1880* indicates that the only user of waterpower other than the Douglas County Mill was the Delaware Flour Mill, formerly owned by Darling, on the north side of the Kaw. In this lithograph, the mill was connected to the dam site by a cable assembly that became very familiar in Lawrence. The 1889 Sanborn map shows additional elevated cables running along the south side of the Kaw.[26] These elevated, moving cables connected the rushing waters of the Kaw to Lawrence factories. The cables intermittently passed through pulley stations that transferred the motion onward to another set of cables until the power reached its site.

These cables extended through alleys to fully power seven major Lawrence industries. One cable stretched east to the Lawrence Paper Company, a Bowersock business. Another connected with the Pacific flour and grain mill, which Bowersock also owned. The last cables ran to the Usher Salvage Iron Company and to the Consolidated Barbed Wire Company. This last cable assembly also branched north to the Leis Chemical Manufacturing Company, and south to Wilder Brothers Shirt Manufacturing. The cables, extending nearly to the 800 block between New Hampshire and Massachusetts streets, then powered S. B. Pierson and Sons Roller Mills and the lighting in the Bowersock Opera House. Despite these diverse uses, milling remained the main use of the power. Waterpower created enough energy to produce 850 barrels of flour in Lawrence per day.[27]

During this period, flooding and damage by floating ice continued to create problems. Each factory used waterpower only when it was available, otherwise burning coal or wood to create steam power. As these manufacturers succeeded, they attracted others, many of whom also put the Kaw to use.

Between 1883 and 1889 the dam site underwent significant changes. Ice damage to the wheel mechanisms and dam in February 1888 necessitated many of these.[28] The Sanborn maps show that following the damage, an entirely new race and mill building were erected. The breadth of these changes illustrates the significance of the dam to Lawrence industry.[29] Most importantly, the mill had now been built out from solid ground and into the river. In addition, Bowersock took this opportunity to add two more wheels and more cables. The map notes that the mill ran day and night, suggesting that the normal pattern of work had been altered to best take advantage of the Kaw's

22. No major structural changes were made to the mill between 1880 and 1886. The 1886 Sanborn map lists six turbines in use. Judging by the structure of the building, six full-size, vertical waterwheels would have been impossible. It is likely that six tub wheels were available in the Douglas County Mill in 1880.

23. *Sanborn Fire Insurance Maps, Lawrence, Kansas* (New York: Sanborn Map Co., 1883), 2. These maps were created by insurance companies so that insured properties could be assessed after damage.

24. Hunter, *Waterpower in the Century of the Steam Engine*, 73.

25. Ibid., 249.

26. *Sanborn Fire Insurance Maps, Lawrence* (1889), 3.

27. This total comes from the Sanborn map's listed output for each mill.

28. Middleton, *The Industrial History of a Midwestern Town*, 49.

29. *Sanborn Fire Insurance Maps, Lawrence* (1889), 3.

power supply. The dam had quickly become the dominant influence in Lawrence industry.

The rear wheelhouse was attached to a new structure, the Lawrence Gas Fuel and Electric Light Company, which housed four dynamos that turned raw power into electric energy. For the first time, the Kaw not only provided motive power but also generated electricity. The Sanborn maps show that water remained the primary industrial power source, but it now was joined by a variety of others, including oil, steam, coal, coke, and a source listed only as fuel.

On the 1897 map, the mill and power building had reached the zenith of its complexity and its centrality. An entire industrial community now was connected to the Kaw through the power building. Only one dynamo had been added, but it nearly doubled the output. Two new cables went directly to the Barbed Wire building, which had moved next to the dam. Industry boomed in Lawrence as the century came to a close.[30]

Booster publications sought to attract eastern business and investment. *A Souvenir History of Lawrence, Kansas, 1898* gave the Bowersock Dam a full-page treatment.[31] Lawrence had grown into a successful and progressive industrial hub for Kansas and the Midwest. Even though most of its manufacturers possessed alternative sources of power, the Kaw continued to be a primary attraction. It mattered little whether manufacturing companies were drawn to the inexpensive power or access to established industries; the spinning cables emanating from the Bowersock Dam greatly enhanced Lawrence's marketability.

"The 1903 flood," said Justin Hill, J. D. Bowersock's grandson, "carried driftwood under the mill. We had men down there 24 hours a day pulling out driftwood to try and save it, but the driftwood finally pulled out the bottom and the whole thing fell in the river."[32] Where the dam, mill building, and power generators once stood, there remained only a spattering of the surrounding buildings and the stone walls of the race. The damage was estimated around $100,000, and all was uninsured.

Thanks to Bowersock's persistent investment and the lack of a ready supply of other fuels, the Bowersock Dam had already outlived many similar structures throughout the United States. But the destruction of 1903 stands out as the moment when the dam could have most easily ceased to exist. According to the 1905 Sanborn map, the industries continued to operate, with the exception of the extensively damaged barbed wire complex. However, the map also recorded a significant change in Lawrence industry: every factory and mill listed its sole source of power as gas, electricity, or steam. Elevated cable assemblies or pulley stations no longer operated. On the map, the flume was outlined, and described as "OUT OF REPAIR. TO BE MADE SERVICEABLE." No Lawrence industry listed water as a power source.[33]

Bowersock would not be defeated by the river: he repaired the dam, and the waterpower of the Kaw remained a commodity. However, the packaging of that commodity changed. The waterpower always technically belonged to a private owner, but it maintained the appearance of also belonging to the community. Even if Bowersock held shares and sat on the directing boards of many of the industries his dam powered, his authority was exerted behind the scenes. Even if one man basically controlled all of Lawrence industry, each business carried its own name and maintained an air of self-ownership. The dam was a symbol of community progress, not of personal empire.

The 1903 flood changed this sense of community. The repairs and reconstruction of the mill and power buildings after the 1903 flood seem to have made the Kaw's flow appear more a private commodity than ever before. Originally, the river had been the only force to power Lawrence industry. Bowersock had made it an affordable option to compete with or supplement the use of other energy sources as they became available. The river's power offered the community a foundation for its industry and a symbol of the community's collective progress. But spiralling

30. Ibid. (1897), 3.

31. E. F. Caldwell, *A Souvenir History of Lawrence, Kansas, 1898* (Lawrence: n.d.).

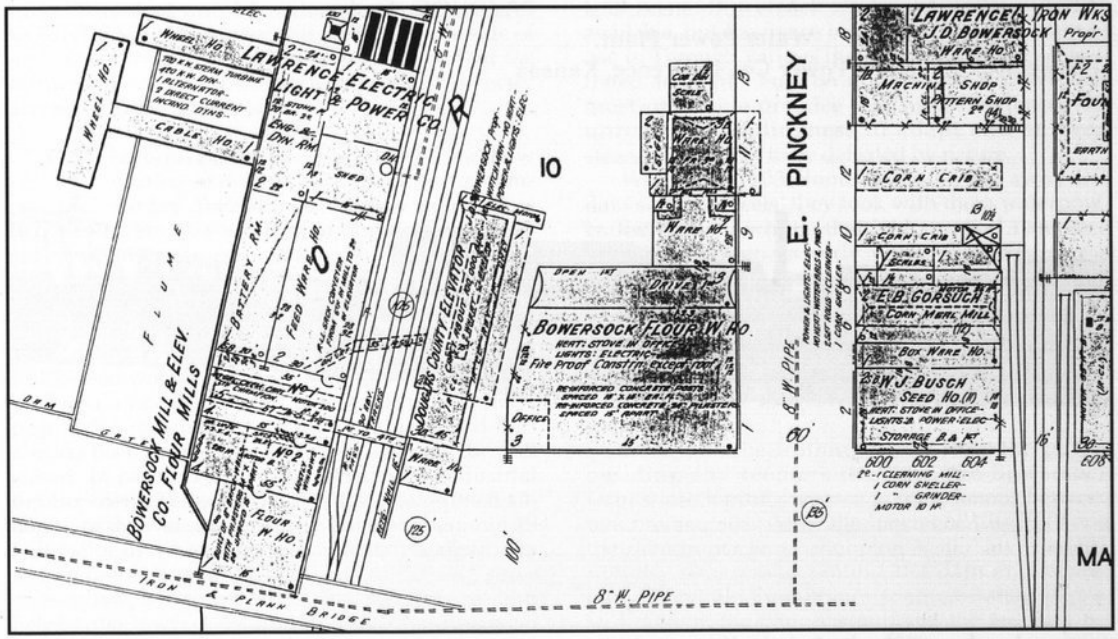
32. Justin Hill, interview, May 18, 1976 (Typescript, Elizabeth M. Watkins Museum, Lawrence, Kans.).

33. *Sanborn Fire Insurance Maps, Lawrence* (1905), 3.

down the Kaw with the floodwaters of 1903 went industry's dependence on this energy source.

While the dam stood in disrepair, each business moved forward—progressed—without the aid of the river. Lawrence industry no longer needed the Kaw's energy. Bowersock's decision to rebuild the dam and power building was a personal investment that would benefit his own standing: the generated power would go only into his own factory and toward making electricity that he would sell to companies for his own profit.

A booster publication, *Lawrence, Kansas, Souvenir, 1908* displayed the new Bowersock Mills and Power Company, makers of well-known Zephyr flour. "This mill," read the description, "is operated by electrically developed water power and the company has power to lease."[34] American industry and business had changed, and Bowersock had changed with it. The flow of the Kaw had brought opportunity and progress to this small town on the prairie, but now it was a symbol of a bygone era. When Bowersock realized that the town's need for waterpower had diminished, he revamped his dam and power business. The Kaw's flow remained a commodity, but became much less a progressive symbol.



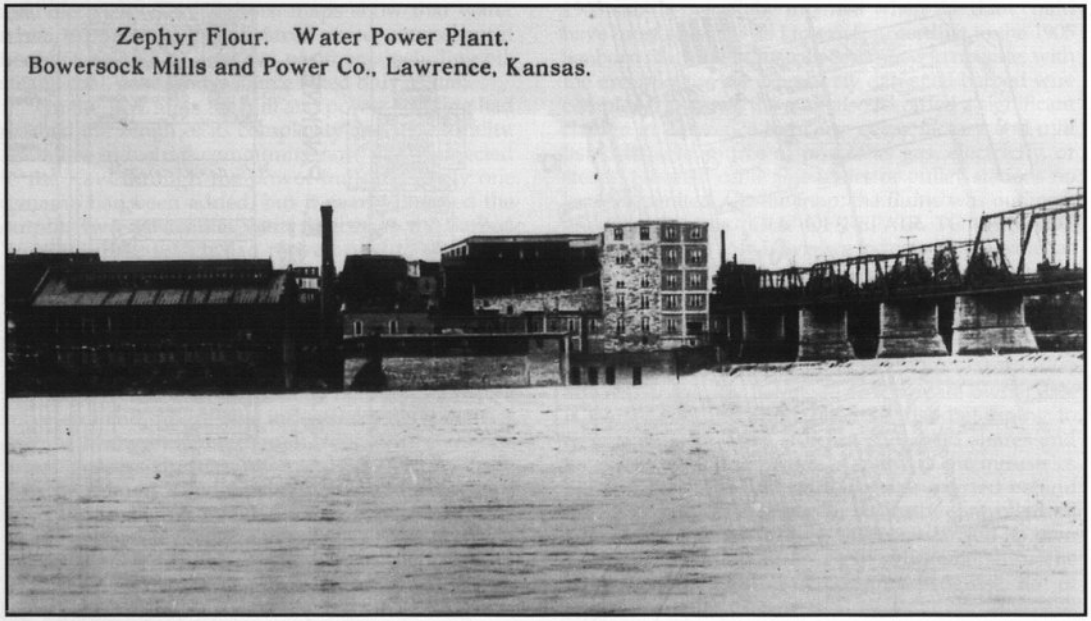
The 1912 Sanborn map depicts an entirely different and much simplified waterpower area. The industries shown here, which once relied on waterpower for energy, now were utilizing other power sources.

The 1912 Sanborn map shows an entirely different and much simplified waterpower area. A narrow wheelhouse ran along the north end of the flume run,

34. *Lawrence, Kansas, Souvenir, 1908* (New York: Freeman Publishing Co., 1909).

very near its end. From its center, a cable house jutted toward the bank, suspended above the race, and connected to the main Lawrence Electric Light and Power building. A second wheelhouse ran horizontally across the flume's end. These wheelhouses held the turbines whose energy surged through dynamos and alternators to become electricity.[35] Still, no Lawrence industry used waterpower. Many businesses and homes may have used a portion of the electricity generated by the turbines powering Bowersock's energy business, but the users to whom the power went cannot be determined. The Kaw was no longer a direct link to Lawrence industry and progress: at this point its value had become only historical.

Just as he previously had been willing to fight the river single-handedly, Bowersock also was willing to stand prominently as the river's owner. Photographs in a 1913 booster publication, *Lawrence: Today and Yesterday*, illustrate the "Bowersock Interests"; the dam, and in the foreground the river, fell within Bowersock's control.[36] As the twentieth century continued, Bowersock used his mill's prominent location for advertising, and in each instance the river appeared as much a Bowersock interest as the buildings around it.



By the early twentieth century, Bowersock used his mill's prominent location for advertising, and he left no doubt about the ownership of the dam and surrounding buildings.

35. *Sanborn Fire Insurance Maps, Lawrence* (1912), 3.

36. *Lawrence: Today and Yesterday* (Lawrence, Kans.: Lawrence Daily Journal-World, 1913), 70.

The river's power was a commodity only if this force could be utilized. The turbines made this possible in Bowersock's dam building, just as they had since 1874. Bowersock left no doubt about the ownership of the dam and surrounding buildings when he added a large sign atop the tallest structure. The sign read "ZEPHYR" and was accompanied by a large model of an old waterwheel. DOUGLAS COUNTY MILL no longer was written on the side of a clapboard building; the new sign denoted that the harnessed waters of the Kaw now most directly served one man's ingenuity.

The Bowersock Dam transformed the Kaw into second nature by making it a commodity. Yet European settlers more or less had viewed the Kaw as a commodity as soon as they set eyes on it in the early 1850s, using it as the rationale for locating a town. Within the history of the Kaw as second nature is a tale of changing industry and personal values. A chapter of this history officially ended on June 13, 1968, when the Bowersock Mill ceased working.

From an economic and industrial history viewpoint, the importance of the dam and mill had already been greatly diminished by the time the mill closed. In his 1941 history of Lawrence's industrial development, Kenneth Middleton wrote, "The availability of the water power may have been an important factor in the location of the first . . . enterprises in Lawrence, but it has had little to do with their subsequent development."[37] In essence, the dam helped the town develop, but its lasting historical significance is more an illustration of industrial development than an assurance of long-term economic success. The use of the Bowersock Dam has spanned very different periods of industrial development, which become more evident in studies of the dam's changes since its opening in 1874.

The data collected from the Sanborn maps shows the dramatic progression and persistence of Lawrence's commitment to waterpower from 1879 to 1903. As the nineteenth century closed, the continued use of waterpower in Lawrence can be viewed as a tribute to Bowersock's influence, but also to the keen foresight with which this capitalist viewed the industrial scene. Bowersock made waterpower readily available, but Lawrence businessmen had to want to use it. Through various methods, Bowersock orchestrated an empire built on waterpower. However, his most profitable practice was his persistence—an unrelenting willingness to adapt and an even stronger drive not to be defeated by nature.

When the 1903 floodwaters swept away the dam's waterwheels, they took with them waterpower, the training wheels that had steadied Lawrence industry through its early years. With the town's dependence on waterpower at an end, the flow of the Kansas River became the sole domain of J. D. Bowersock. Protected by the original contract and modern legislation that requires utilities to buy energy created through renewable resources, the dam continues today to create electricity that is directly put on line.

Today, as the frothing water exits the power building and reenters the Kaw, the Bowersock Dam's interloping presence is conspicuous between two modern structures: the Lawrence City Hall and the Riverfront Outlet Shopping Mall. Lawrence has literally progressed around the dam and power building, while the turbines continued their persistent motion; the dam has outlived the industry for which it was the hub. In the 1970s, when Lawrence residents debated the location for their new city hall, many looked to their past to identify those factors most responsible for the town's success and progress. The facts and memories left little doubt that City Hall should be built on the banks of the Kansas River. KH

37. Middleton, *The Industrial History of a Midwestern Town*, 53.