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The Great Flood of 1844 Along the Kansas and Marais des Cygnes Rivers

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AVAILABLE records indicate that the flood of 1844 was five to six and one half feet higher than the disastrous flood of 1951 from Manhattan to below Lawrence on the Kansas river, and at Ottawa on the Marais des Cygnes (Osage) river. Most, if not all, of the tributaries of the Kansas river also had great floods, possibly record-breaking floods.

It staggers the imagination to contemplate the damage had the 1951 flood equaled or exceeded that of 1844. Kansas was not open to settlement until ten years after 1844. About the only white men in the territory at the time were a few fur traders, a comparatively few military personnel and a few missionaries, mostly in the eastern portion. In the 107 years between these floods, prosperous farm communities, towns and cities were built over the state, and especially in lowlands along the rivers. This presented a tremendous flood hazard.

It is a well recognized fact that nature, having produced a great flood, will eventually produce another as great. A small difference in the distribution of the heavy rains on July 10-12, 1951, and their continuation for one day longer, would in all probability have produced a flood equal to that of 1844.

In a recent article Verne Alexander, area hydrologic engineer, U. S. Weather Bureau, stated:

The main storm center [the one that produced the torrential rains of July 9-12, 1951] was near the divide between three river basins—the Osage, Kansas, and Neosho. From a meteorological standpoint, if this center had occurred 75 miles further northwest, 40 per cent more precipitation would have been added to the Kansas Basin.¹

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1. *Civil Engineering*, Easton, Pa., November, 1951.

Had these rains, in addition, continued one day longer there are many reasons to believe the high-water marks of 1844 would have been reached, or even exceeded, along the Kansas river.

CRESTS OF THE 1844 FLOOD ALONG THE KANSAS AND MARAIS DES CYGNES
(OSAGE) RIVERS

Location	Height of 1844 Flood Over 1951 (in Feet).	Crest of 1844 Flood.*	Crest of 1951 Flood.	Crest of 1844 Flood as Previously Determined by Reference to 1903 Flood.†
On Kansas River				
Manhattan	6.5	40.0	33.5	40.0
Topeka	6.1	42.5	36.4	42.4
Near Topeka, at Bishop	5.8	42.2
Near Topeka, at Menoken	3.4 †	39.8	...	42.2
Near Lawrence, at Lake View	5.0 ‡	35.4	30.4	...
Kansas City, Mo.	2.0	38.0	36.0	38.0
On Marais des Cygnes (Osage) River				
Ottawa	7.0	49.1	42.1	40.0

* Assuming the difference in height of the two floods was the same at the gage site as at the high-water mark.

† Taken from *Climate of Kansas*, 1948, pp. 279, 280.

‡ Crest of 1951 probably raised by ridge of high ground. See remarks under Menoken discussion.

§ Determined as "More than 5 feet."

|| Kansas City crest was on the Missouri river and determined from a definite high-water mark.

Many, if not all, tributaries of the Kansas river also had great overflows in 1844, but as far as is known, no high-water marks exist along these streams.

In a paper prepared for the State Historical Society in 1878, O. P. Hamilton, of Salina, remarked on the 1844 flood as follows:

On the Solomon river driftwood, and a buffalo carcass (pretty well dried up) were found lodged in trees at a height that would cover the highest bottoms several feet, . . . indicating . . . high water. Evidences of great floods were also found on the Smoky Hill, and the water must have flooded the present town site of Salina, Kansas four feet deep.

This great flood was seen by the Indian trader, Bent, located on the upper Arkansas river, who was . . . on his way to Missouri. He had to follow the divides as best he could. Every river was full from bluff to bluff.²

Z. R. Hook, agent for the Union Pacific and present mayor of Manhattan, a man exceptionally well versed in river lore, stated that early settlers in the Blue river valley above Manhattan were told about the great flood by Indians, who advised them to build their houses well above the valley floor. Apparently, this advice was generally taken at the time, but later settlers disregarded it.

2. O. P. Hamilton, *A Brief Sketch of the Great American Desert* . . . p. 8.

There is also considerable evidence that in 1844 the Marais des Cygnes (Osage) river reached the highest stages ever known along that stream.

The cause of the 1844 flood, which crested at Kansas City on the Missouri on June 16, was evidently the same as that of all other great floods in Kansas—prolonged and heavy rains over a wide area. Precipitation records at the time were kept only at two places in the territory, at Leavenworth and Ft. Scott. At Leavenworth the first four months of the year were fairly dry, but during May and June a total of 20.53 inches was measured. Ft. Scott also had comparatively dry weather for at least the first three months of the year, but recorded a total of 27.43 inches in May and June.

The diary of the Rev. Jotham Meeker, a missionary who lived near the present city of Ottawa, mentioned continuous rains from May 7 to June 10 and a great flood on the Marais des Cygnes. Andreas, in his *History of Kansas*, quoted from the Wyandotte Herald:

The spring of 1844 was warm and dry until May, when it commenced to rain, and continued for six weeks—rain falling every day. What is now . . . Kansas City, Mo., [evidently referring to ground along the Missouri river] was covered with 14 feet of water.³

The diary of Father Hoechen, of the Pottawatomie Mission on Sugar creek, stated: "June [1844]. Here as everywhere around, it has been raining for forty days in succession and great floods covered the country. The damage, however, was not great."⁴

Investigations show that the 1844 flood at Manhattan was about 6.5 feet higher than that of 1951. The crest of the latter, as registered at the official gage, was 33.5 feet. Assuming that the difference in level between the two floods was the same at the site of the gage as at the location of the high-water mark of 1844, this would make a stage of 40.0 feet for 1844.⁵

The 1844 high-water mark at Manhattan was reported by Z. R. Hook as follows: "According to Indian legend, 'The Big Water' (of 1844) came to the present location of the southeast corner of the Campus of the Kansas State College which at its lowest point is 40.0 feet above zero datum of the river gage."

In a letter dated January 13, 1952, Mr. Hook quoted levels run by the city engineer which show that this high-water mark was

3. A. T. Andreas and W. G. Cutler, *History of the State of Kansas* (Chicago, 1883), p. 292.

4. *The Dial*, St. Mary's, October, 1890, p. 17.

5. S. D. Flora, *Climate of Kansas* (Report of the Kansas State Board of Agriculture, June, 1948), p. 287.

6.5 feet above a near-by high-water mark of the 1951 flood. He stated that this is the minimum difference, since no one can say exactly where the drift line (of the 1844 flood) stopped at the campus site, where the ground rises very rapidly.

The height of the 1844 flood at Topeka was 6.1 feet above that of 1951, equal to a reading of 42.4 feet on the Topeka gage, according to the best evidence available.

F. W. Giles, one of the nine men who drew up an agreement for the town association of Topeka on December 5, 1854, only ten years after the great flood, mentioned it in his book, *Thirty Years in Topeka*:

. . . The Kansas river bottoms were flooded for its entire length. At the site of Topeka, the river's breadth was from the line of Third street on the south to the bluffs two miles to the north . . . the water standing to the depth of twenty feet, where now, in the first ward of Topeka [North Topeka] dwell three thousand people.⁶

Since all activities and building in the early days of Topeka centered on lower Kansas avenue, it seems evident that Giles referred to the intersection of Third street and Kansas avenue, about one half mile from the present location of the river gage. Third street dips down each way from Kansas avenue.

This location is confirmed in an early history of Shawnee county by W. W. Cone, who remarked: "During the flood, Major Cumings [Richard W. Cummins?], paymaster U. S. Army, wishing to cross from the south to the north side of the Kaw river, stepped into a canoe at about the corner of Topeka avenue and Second street and was rowed by an Indian from there to the bluffs [on the north side]."⁷ A contour map of the Topeka quadrangle, prepared by the state and U. S. Geological Survey, indicates the elevation of Second and Topeka is not more than three to five feet higher than the intersection of Third and Kansas avenue. The ground slopes away rapidly to the north, east and west of Second and Topeka. It seems very likely that the place where Major Cummins stepped into the boat, probably near the time of the crest, was at about the elevation at Third and Kansas.

George A. Root, a resident of Topeka, and for more than 55 years an official of the State Historical Society, a man exceptionally well informed in regard to such matters, stated that the level of Third street at Kansas avenue had never been raised more than the thickness of the pavement. The slope of the street at that

6. F. W. Giles, *Thirty Years in Topeka* (Topeka, 1886), p. 156.

7. W. W. Cone, *Historical Sketch of Shawnee County, Kansas* (Topeka, 1877), p. 7.

point indicates that there could have been no reason to lower it. It is believed that the ground level at this place still marks the approximate crest of the 1844 flood.

On November 26, 1951, levels were run from a high-water mark of the 1951 flood near Second and Kansas avenue to Third and Kansas by Guy E. Gibson and Robert L. Lingo, engineers of the water resources division of the State Board of Agriculture, with the following results:

	Elevation Above 1951 High-Water Mark
Floor of gutter southeast corner of intersection	7.69 feet
Floor of gutter southwest corner of intersection	7.72 "
Floor of gutter northwest corner of intersection	5.96 "
Floor of gutter northeast corner of intersection	6.02 "
Average elevation of four corners	6.8 feet

W. E. Baldry, city engineer at Topeka for many years and a man thoroughly familiar with all paving jobs, gave it as his opinion the ground level averages eight inches, or 0.7 foot, below the floor of the gutter in each case.

Subtracting 0.7 from 6.8, the average of the four gutters, gives 6.1 feet which, according to evidence available, is the height of the 1844 flood above that of 1951 at this point. Assuming that the same difference in elevation of the two floods prevailed at the site of the river gage, the gage reading of the 1844 flood would have been 42.5 feet. The crest of the 1951 flood was 36.4 feet.

In addition to the high-water mark at Third and Kansas avenue, there exist two other legendary high-water marks of the 1844 flood a few miles from the city. One is located near the former site of the Rock Island station, Bishop, a little less than half a mile south of the river and five miles almost due west from the present location of the river gage on the Topeka avenue bridge. The other is near the former Union Pacific station, Menoken, 4½ miles northwest of the Topeka avenue bridge, 1½ miles north of the river, and 2½ miles northeast of Bishop.

The 1844 high-water mark at Bishop was pointed out by B. A. Snook, 323 Lindenwood, Topeka. He has been familiar with the Bishop locality for many years. He identified it as the elevation of the midway point of a sloping northwest-southeast section of a graveled road, about 300 feet in length, leading southeast from a bridge across a creek one-fourth mile southeast of the Bishop station. This road makes a sharp turn in the vicinity of the bridge and another turn about 300 feet from it. It is practically straight

In 1947 this location was surveyed by engineers from the water resources division of the State Agricultural Board, under supervision of George S. Knapp, chief engineer, and a map was prepared showing contour lines for each foot. Elevations were determined by reference to U. S. C. & G. S. bench mark Q-115, near the Menoken station. Elevation of this bench mark is given as 902.006 ft., 1929 general adjustment. The elevation of the top of the knoll, as determined by this survey, is 902.4 feet.

The 1903 high-water mark near the Kassebaum barn had been destroyed before this survey was made, but the engineers were able to locate high-water marks of the 1903 and 1951 floods on what is known as the Christman house, approximately half a mile south of this knoll, which they refer to as "The Legendary Island."

Elevation of the 1951 HWM on Christman house	898.53
Elevation of 1903 HWM on Christman house	892.94
Height of 1951 flood over 1903 flood	5.59 feet.

A high-water mark of 1951 near the knoll, "The Legendary Island," was found to have an elevation of 898.5 feet, or 3.9 feet below the top of the knoll. The contour map shows that with a flood crest below 900 feet there would have been a peninsula instead of an island at this place in 1844. If that flood had reached an elevation of 902.4 feet, water would have covered the knoll and there would have been no island. It seems logical that the knoll, or island, must have been at least 0.5 foot above the 1844 flood, making its height at this point 901.9 feet, or 3.4 feet above the crest of 1951. Assuming the same difference obtained at the site of the Topeka river gage, this would correspond to a reading of 39.8 feet.

The following is offered to explain why the difference between the 1951 and 1844 crests at this site was less than at other points of record in the Kansas river basin:

The 1903 flood barely reached the high ridge of which the "Legendary Island" was a part and its flow was probably not materially affected. The 1951 flood came well up on this ridge and was also obstructed by the ridge of ground that divides Soldier creek basin from the basin of the river proper. This ridge extends northwest for at least 11 miles. The ledge on which the "Legendary Island" was located is over 4,000 feet long and almost at a right angle to the direction of flow at this place.

Very little of the water of the 1951 flood escaped into the basin of Soldier creek to the north over this high ridge. The 1844 flood was so high it overflowed this ridge entirely and a considerable

part of its water flowed into the Soldier creek basin. Consequently, its flow would not be retarded as the 1951 flood water was. These factors, in all probability, account for the fact that the difference in elevation between the 1951 and 1844 floods was not as great at this place as in most other parts of the Kansas river valley between Manhattan and Lawrence.

No high-water marks of the 1844 flood are known to exist in Lawrence, but there are records of one near Lake View, about five miles, airline distance, upstream and near the Kansas river.

Levels run from a near-by 1951 high-water mark by Prof. W. C. McNown, of Kansas University, indicate that the 1844 flood was "more than 5 feet" higher than that of 1951 at this place. Assuming that the same difference between the height of the two floods obtained at the site of the Lawrence river gage, this would make a reading of at least 35.4 feet for the 1844 crest reading. The reading of the 1951 crest was 30.4 feet.

This high-water mark was described in a letter dated February 9, 1952, from Prof. J. O. Jones, an associate of Professor McNown, as follows:

Mr. Henry Beurman, who is quite an elderly man who has lived on a farm in the vicinity of Lake View most, if not all, of his life, reported that his aunt told him facts she obtained from the Sweezer family, one of the early settlers in the vicinity. When the Sweezer family first settled on Sweezer Creek there was a spring where Mrs. Sweezer did the family washing. Near the spring was a tree in the crotch of which was a log. The Sweezers ascertained the log floated to that location in the great flood of 1844. The tree had been cut down prior to Prof. McNown's visit but he was able to get a rough idea of the height of the log from Mr. Beurman's recollection of it. On the basis of that evidence Prof. McNown determined the height of the 1844 flood was more than five feet above that of 1951.

There are no known high-water marks of the 1844 flood in Kansas City, Kan., but prior to 1920 there was a definite high-water mark cut in the stone of one of the piers of the Hannibal and St. Joseph railway bridge across the Missouri river in Kansas City, Mo.

Verne Alexander, area engineer, U. S. Weather Bureau, reported as follows concerning this in a letter dated August 8, 1951:

38.0 feet, from the highwater mark of 1844, established and authenticated by Octave Chanute, Supervising Engineer of the First Hannibal and St. Joseph Railway Company bridge in Kansas City, Mo. The mark, which was cut into the stone of one of the piers, was destroyed in 1920 at the time of rebuilding the bridge. New piers were erected at that time. The value of 38 feet has been accepted as correct by the U. S. Engineers. Historical books on file in the Engineers office place the date of the highwater at June 16, 1844.

The crest of the 1951 flood on the Missouri at Kansas City was 36.0 feet from 5 to 7 A. M. on July 14.

An approximate high-water mark of the 1844 flood of the Marais des Cygnes at Ottawa was reported by Warren J. Sheldon, a prominent merchant and life-long resident of Ottawa. He stated that his father, who settled near Ottawa in 1859, knew of a log left by the flood near what is now the intersection of Seventh and Poplar streets.

Prior to the 1951 flood, an investigation, based on levels in the office of the city engineer, indicated that this intersection was at an elevation of 40.0 feet above zero datum of the river gage and 2.4 feet higher than the crest of the 1928 flood, the highest of record at that time.

Investigations made by R. A. Garrett, official in charge, Weather Bureau Office, Topeka, indicated that the intersection in question was about seven feet higher than a 1951 high-water mark in that vicinity. Levels were not run at the time. The difference was scaled from a contour map furnished by the city engineer and there is a possibility of an error of plus or minus a foot, according to Mr. Garrett. Assuming that the same difference in levels of the two floods obtained at the gage site, this would correspond to a gage reading of 49.1 feet. The crest in 1951 was 42.1 feet.

The Seventh and Poplar intersection is 4,000 feet downstream, south-southeast of the gage. This conceivably might affect the slope of the water at times of high crests. It might account for the difference in elevation of the 1844 flood arrived at in the two investigations. It is believed that the value obtained by comparison with the 1951 crest near the 1844 high-water mark, 49.1 feet, is a closer approximation of the true value.