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LOCK "E"

The Effort to Tame the Cumberland River

Transportation of goods and passengers have always been a crucial component in settling and developing new territory. In the 1700's, new trails were painstakingly blazed into Kentucky concurrent with the establishment of settlements. Fortunately, an even more efficient highway system was in place long before the white man or even the Native Americans blazed these trails across Kentucky.

Kentucky is blessed with nearly 3,000 miles of rivers capable of transportation, not counting streams and tributaries. These waterways not only made wilderness travel easier, but they also became the anchor to every deed in Kentucky east of the Tennessee River. These deeds, using metes and bounds, can all be traced back in time to reference the nearest waterway. Metes and bounds are used in 19 states, predominately the 13 original colonies and their affiliates.

These rivers continue to serve a vital function in today's economy, particularly regarding towboat transportation and to a not-so-much lesser extent, recreation. However, getting to the point that transportation on Kentucky's rivers became consistently reliable took considerable engineering and years of work.

In our region, the Cumberland River is certainly the most heavily traveled waterway. Covering 688 miles, the Cumberland begins in Eastern Kentucky and ventures into Tennessee before crossing western Kentucky to empty into the Ohio River.

Early French traders called it “The River of the Shawnee” or sometimes simply Shawnee River. Thomas Walker, the man who made a mess of surveying the Kentucky / Tennessee state line, named the Cumberland River in 1758. It is presumed that he named the river after an acquaintance of his, the Duke of Cumberland, who, by the way, was not very well thought of by the patriots. He was, after all, the second son of King George.

The first Europeans to explore and map the Cumberland River were not settlers but explorers. Their venture deep into Indian territory was dangerous. Not only were some natives hostile but also the river and surrounding territory were completely unsettled. These men ventured into these parts completely alone and into territory that had never seen a white man. I once heard that man knew more about the moon before going there than we knew about the frontier when we ventured here.

The ownership of the territory on both sides of the Mississippi was in flux for many years. The Spanish and the French claimed it alternately. We fail to realize the Spanish influence in the exploration of the area; but, with town names like New Madrid and Cadiz, it all begins to make sense. It so happened the territory was in French hands when President Thomas Jefferson made the Louisiana Purchase from a cash strapped Emperor, Napoleon Bonaparte.

The first recorded sighting of the Cumberland River was in 1674 by explorers Louis Jolliet and Jacques Marquette, who drew a map from memory after venturing down the Mississippi. They accurately depicted the mouth of the Cumberland but gave it no name. Several French fur trappers and traders traveled the Cumberland in the 1680’s. It was obviously already a well-traveled highway. Those first European explorers reported natives who traveled the river in dugout canoes of which the largest would be 50 feet long and five feet wide and capable of

carrying 30 men. The Shawnee, Cherokee, Creek, and the Chickasaw all made use of the Cumberland River.

It was a French-Canadian fur trader, Timothy Demonbreun, who in 1710, established the French Lick trading post that became Nashville. Seventy-five years later, settlements finally began to be established along the Cumberland. This flood of settlers was led by James Robertson and John Donalson. While Roberson traveled over land, it was John Donalson who travel by way of the Cumberland River from its mouth at the Ohio. (By the way, it is John Donelson for whom Donaldson Creek in Trigg County is named.)

The Cumberland ran wild. Transportation was difficult. Just one example is in approaching Nashville from the Ohio River, there were great shoals that often left boats severely damaged or stranded in Nashville until the river rose. In total there were ten major shoals along the Lower Cumberland. The only means of traveling the river was by flatboat or various smaller vessels, which were poled or paddled. Interestingly, there are records of sailing vessels built in Sumner County, Tennessee, that sailed to New Orleans to be sold for costal use and foreign commerce. Also, great rafts of timber were floated down the river to various ports. These rafts were often 100 feet by 30 feet and eight feet tall.

Well before 1800, traffic on the Cumberland included a motley collection of entrepreneurs, all aboard flatboats, floating vessels of mostly questionable construction. There were blacksmiths, purveyors of liquor and dry-goods, libraries, thespian troops, and “floating mansions of iniquity.” And, of course, there were bandits and river pirates.

Robert Fulton built the first successful steamboat in 1807, and the inland waterways suddenly became of utmost importance to the U. S. economy. Immediately, the Cumberland River

became the major interstate highway through west Kentucky and central Tennessee. The aforementioned obstacles made the river treacherous and unpredictable. Nevertheless, the push of progress and the greed of commerce intensified river traffic; and, by necessity, the inconveniences were dealt with as a necessary evil for the surprisingly long duration of 80 years after the invention of the steamboat. The General Jackson was the first steamboat to reach Nashville in March of 1819. Only on its second attempt in two years was it able to pass the Harpeth Shoals to dock in Nashville. This successful maneuver was made possible by the sudden and unexpected rise of the river.

From the beginning of the establishment of settlements along the lower Cumberland and its tributaries, settlers recognized the convenience and tremendous potential of the rivers. It was the only logical method of long-distance travel and for transporting goods, not only to markets in New Orleans but also from there to markets in Europe. These goods included the enormous crops of tobacco and timber that would have been impossible to transport prior to the railroads. By 1850, two hundred and fifty different steamboats regularly traveled the lower Cumberland. Within ten years, that number nearly doubled to 400 steamboats and many of them quite elaborate.

Business men great and small set their minds to establish means to tame the waterways. Every town along the way benefited from the river traffic. In 1857, a company was chartered and stock sold by forward-thinking gentlemen of Cadiz for the purpose of privately constructing a lock and dam to raise the water level for an 18 mile stretch of Little River to make it easier to navigate to the town of Cadiz from the Cumberland River. It was a bright idea that never transpired.

After the Civil War and Reconstruction between 1870 and 1890, the federal government spent about \$300,000 to improve the Cumberland River channel at the most dangerous obstructions. This is when an attempt was made to blast and clear the shoals just below Nashville. But still, river navigation was virtually unbearable. The Army Corps of Engineers estimated that the lower Cumberland was navigable only 6 months per year by boats drawing up to three feet. Generally, boats drawing up to 16 inches could expect to travel the river year-round.

The first lock on the Cumberland River was commenced in 1887. It was built just below Nashville near Harpeth Shoals. This portion of the river was the site of the most formidable obstruction in the lower Cumberland for navigation. This construction would become known as Lock and Dam A. With the planning and construction of this lock, a great deal of interest began to develop, particularly among the steamboat companies, to build a series of locks and dams on the Cumberland to make it easier to navigate. Those interested created the “Cumberland River Improvement Association” for the purpose of lobbying Congress to fund this cause.

The United States Army Corps of Engineers was persuaded to survey and determine the potential construction of locks on the lower Cumberland. It was concluded that the river would benefit from the construction of seven locks along the 192 miles between Nashville, Tennessee, and the river’s mouth at Smithland, Kentucky. Congress appropriated funds to begin this project in 1892. Actually, Congress only appropriated \$40,000 of the nearly two million dollars the Corps estimated to be necessary. The Corps estimated the annual cost to operate this entire lock system below Nashville to be \$50,000.

Of the seven locks designed for the lower Cumberland, only six were ever built. They were named alphabetically “A” through “G” beginning at Nashville. The locks having a direct

effect on Kentucky were Lock “D” located near Dover, Tennessee; Lock “E” located near Canton, and Lock “F” at Eddyville. Lock “G” was never constructed as the lock and dam system became obsolete before the final lock was built.

Nine dams, which were numbered starting in Nashville, were built on the upper Cumberland, which was the designation of the river above Nashville. By 1924, a total of 15 locks and dams raised the Cumberland River a minimum of six feet. By then, the river traffic had changed considerably. The advent of railroads and overland highways relieved the river traffic of much pressure. Steam boats disappeared and were replaced with diesel engines and tow boats with steel barges.

The construction of Lock “E” in 1917 in Trigg County was viewed by the locals with much interest. Originally, it was planned to build Lock “E” and “F” by contract; but, the bids were higher than expected, and it was decided to build them with hired labor as all the previous locks and dams had been constructed. It was this construction project that brought my grandfather Riley Fourshee to Trigg County as a carpenter from his home near Cumberland Furnace, Tennessee.

The plans and construction of the locks were all the same with the exception of the depth of each lock. Each lock was designed to be 280 feet in length by 52 feet wide. The lift of each lock varied. Even the construction process was executed with the same military precision. In 1915, the Corps purchased twenty acres in Trigg County, south of Canton near the mouth of Terrapin Creek on the eastern bank of the Cumberland River. On January 20, 1917, a large crew of men arrived to begin work on the lock that would eventually take nearly six years to complete.

Those employees who arrived first, clear-cut the timber and stacked it for fire wood. It took six months to build the supporting community. A two-story barrack was built along with a general store and a multitude of supporting structures including offices; buildings for the storage of tools, materials, and dynamite; a mess hall; a blacksmith shop; a carpenter's shop; and, I feel certain, an outhouse or two. In total, 13 temporary structures were constructed on site. Five of these structures were partially constructed from material salvaged from temporary buildings at other locks. 1,100 feet of narrow gage railroad was laid including a trestle 206 feet long. A sawmill and a concrete mixing plant were also built on site. 3,000 feet of fence were installed, and a road built one-half mile long from the lock to the nearest county road. Three and a half miles of telephone line were installed to connect to the existing line to Cadiz. In short time, the young men scoped out the neighborhood; and, the air being thick with pheromones, discovered any and all eligible young ladies in the community.

The initial construction of the locks, including Lock "E," were timber and stone. Hundreds of great pine timbers as big as 12 inches square and 20 – 30 feet long, a total of 689,000 board feet of timber, were shipped from Hattiesburg, Mississippi, by train to Kuttawa then by barge up the river to Lock "E". The locks were built the same way as they had been for centuries. Construction was accomplished by more primitive methods than was necessary or more primitive than was prevalent in private construction. Steam power was certainly available for dredging; but, the entire project was constructed using wood coffer dams, hand tools, and animals to haul supplies. Wooden cribs for the dams were filled with stone and submerged by hand. Men swam underwater to accomplish many tasks. Clay was packed by the bare feet of the workers.

Due to the work force entering World War I, a severe labor shortage developed. The work force at the construction site dwindled to 20 percent of normal. Those men who were not drafted frequently found better paying jobs nearby as the community also suffered from the labor shortage. High river levels and extreme weather conditions also caused problems early on in the construction. The Cumberland River froze over that first winter sufficient to allow people to easily walk across. Congress, as was typical, appropriated funds in drips and drabs, forcing the contracts to be accomplished in small increments. In addition to the usual construction expenses and ongoing maintenance, the additional expense of guarding the locks was incurred during the war. Each lock and dam had an armed guard assigned to protect it against damage from enemy agents.

Lock E was finally placed in operation November 20, 1922, at the cost of \$105,000. The construction project included a grand house for the lockmaster's family with white wood siding and a wide sweeping porch. It was situated on the hill overlooking the lock. Also constructed was a house for a lock employee. A pleasant bonus for the community was the establishment of picnic grounds at the base of the hill near the mouth of Terrapin Creek. This site became a favorite location for family reunions and church groups from all over the county.

It took 40 years to construct the locks and dams on the Cumberland. By the time all of the locks were completed in 1928, steamboat traffic was disappearing. River traffic had dwindled to an all-time low. The locks were small but were invaluable during the steam era; but, as modern towboats gained popularity, the locks proved to be inadequate.

Between 1930 and 1935, Congress appropriated funds to modernize the locks. Lock "E" along with the other locks were all excavated to create nine-foot channels. Also, the wooden timbers were mostly removed and replaced with concrete.

After World War II, as tow boats were increasing in size, the locks became so small that barge tows would have to be split into three sections each time they passed through a lock, which took an inordinate amount of time.

A thoroughly modern multi-purpose dam had been successfully constructed on the Tennessee River in 1944. As it was obvious that the old lock and dam system was not working, the Corps persuaded Congress to construct a similar dam across the Cumberland River, which would completely eliminate the obsolete locks “C” at Clarksville through “F” at Eddyville. Several dams creating large lakes were also built up the river, eventually eliminating all the old locks and dams.

Portions of the old locks can be found today even though they have either been blasted away or are completely submerged by the several lakes formed on the Cumberland. Locks “D” at Dover and “E” at Canton were dynamited in the early 1960’s for the impoundment of Barkley Lake. Lock “F” near Eddyville is submerged and sufficiently out of the way that it was not dynamited. Some lockmaster’s houses are surviving; however, the one below Canton at Lock “E” no longer stands.

The small locks and dams along the Cumberland River proved to be invaluable for steam transportation, but their usefulness became limited with the development of modern diesel towboats. However, these locks represented the first man-made efforts to tame the Cumberland River. Their success contributed to the development of communities and great cities all along the river.

Today, the Cumberland River is vital to massive tow-boat traffic. It is not unusual to see “modern” paddle wheel passenger boats on the river; however, they are now diesel powered

instead of steam powered. There are presently ten dams on the Cumberland creating lakes, controlling flooding, and generating electricity. These lakes are extremely popular with recreational boaters and fishermen. The contribution of these dams and lakes to the economy of the United States could never have been imagined when Timothy Demonbreun first paddled up the river to Nashville.