

LOCKVILLE HYDROELECTRIC PLANT  
(Lockville Dam, Canal, and Powerhouse)  
Moncure  
Chatham County  
North Carolina

HAER NO. NC-35

HAER  
NC,  
19-11015,  
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PHOTOGRAPHS  
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
NATIONAL PARK SERVICE  
Department of the Interior  
Southeast Region  
Atlanta, Georgia 30303

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Location: Located on the Deep River, approximately 3.5 miles upstream from the confluence of the Haw River  
Moncure, Chatham County, North Carolina

UTM: 17.672250.3943550  
17.672860.3943080  
Quad: Moncure

Date of Construction: Canal - 1850-1855  
Dam and Powerhouse - 1922

Builder/Designer: Moncure Manufacturing Company

Present Owner: Robert M. Linsmayer  
2926 Lone Oak Circle  
St. Paul, Minnesota 55121

Present Use: Unoccupied

Significance: The Lockville dam, canal, and powerhouse occupy a site which is closely associated with important events in the history of Chatham County and in the overall development of North Carolina. Lord Cornwallis is known to have used this site as a campground after the Battle of Guilford Courthouse. In the early to mid-19th century, strong interest in improved river transportation systems resulted in the construction and use of a lock and canal works at the site. The canal was put back into service, beginning in 1922, to provide water power to a newly-established hydroelectric facility at the site. This power plant brought electricity to part of Chatham County and aided in the movement to bring electricity to piedmont North Carolina in the early twentieth century.

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1978

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In 1922, the Moncure Manufacturing Company replaced an old log dam with the present stone and concrete structure in an attempt to convert the existing canal and lock system into a hydroelectric power generating facility. The dam consists of a main concrete section, two earth dike sections and a concrete intake structure on the canal. The dam is 13 feet high and is designed as an overflow structure with a two-foot ogee type spillway. The concrete overflow section is approximately 600 feet long.

The canal intake structure is built of structural concrete with concrete wing walls and rests on a cut stone foundation. Top dimensions of the intake are 51.5 feet long by four feet wide; the structure is 19 feet in height. There are six gate openings, each measuring approximately six feet by six feet. The 2,300-foot long canal drops about three feet in elevation over its length. A typical section of the canal includes a dike along the river side, a bottom width of 30 feet, and the earthen shoreline bank. About 100 feet upstream of the powerhouse, the canal becomes a rectangular section 31 feet wide, with vertical mortared masonry retaining walls on both sides. These stone walls appear to date from the mid-1850s when the Cape Fear and Deep River Navigation Company developed a transportation system to reach from Fayetteville, on the Cape Fear, to Hancock's Mill on the Deep River. The river retaining wall has a trash sluice near the powerhouse which allowed debris, trapped in trash racks, to pass back into the river.

The powerhouse, constructed in 1922, is a simple brick and concrete structure resting on a massive stone foundation. The building lies within the stone retaining walls and, possibly, replaced the old lock structure which was associated with the canal's use as part of an early navigation system. The water in the canal flows under the powerhouse and back into the river. The powerhouse is laid in 6:1 common bond and is devoid of ornamentation except for a parapet wall on the east facade and a very slightly projecting row of brick corbelling at the top. The structure has a flat roof. Much of the building's metal sash has been vandalized or removed, as having the loading doors. The powerhouse once housed a 1,300-horsepower generator. This equipment was removed in 1962 when the owner, Carolina Power and Light, retired the facility from use.

#### Historical Significance

The Lockville Canal Works and Hydroelectric Plant site is associated with three significant events in the history of Chatham County and in the development of the State of North Carolina. During the Revolutionary War period, Lord Cornwallis crossed the Deep River at this site shortly after the Battle of Guilford Courthouse. The construction of canal works at this site, in the late nineteenth century, demonstrated the economic and transportation concerns of the State during that period. Finally, operation of the

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hydroelectric plant at this site, beginning in 1922, brought electricity to the Chatham County area and aided in the growing electrification of the State during the first quarter of the twentieth century.

On March 17, 1781, Lord Cornwallis began his move from the battleground of Guilford Courthouse with shattered troops and few supplies. He proceeded southeast towards Cross Creek (Fayetteville), where he believed additional supplies could be found, camping at Dixon's Mill and the Chatham County Courthouse along the route. The troops next proceeded to Ramsey's Mill where they remained for two days, constructing a bridge across the Deep River.<sup>1</sup> Lighthorse Harry Lee, serving as a spy for the American forces, informed General Nathanael Greene of the British position on Deep River. Greene then ordered Lee to cross the river above the British camp, travel to the bridge location, demolish the bridge, and stop the British force from crossing the river until Green could attack them from the rear. Cornwallis was informed of the scheme, immediately decamped, crossed the river and moved rapidly towards Cross Creek. Greene arrived at Ramsey Mill the following day, March 28, finding only the unburied dead which Cornwallis had left behind. Greene remained at Ramsey Mill for several days before proceeding on to South Carolina. Cornwallis continued on a southeastward march to Wilmington after reaching Cross Creek. The near meeting of Greene and Cornwallis at Ramsey Mill marked the end of battles between the two generals and their forces, conflicts which had formed the substance of Cornwallis' southern campaign.<sup>2</sup>

In the period following the Revolutionary War, the Deep River section prospered, primarily due to the valuable timber sources located there. The eastern towns along the Cape Fear River were particularly eager to acquire the naval stores produced in this region, which formed an important commodity in the State's external trade system. During the late eighteenth century, these commercial interests began advocating improved transportation along the upper Cape Fear River, with advocacy centering in the growing river town of Fayetteville. In response to this interest, the North Carolina General Assembly chartered the Cape Fear Company in 1791. The company was granted authority to improve navigation along the Cape Fear River north to the confluence of the Deep and Haw rivers. No action was taken by the Cape Fear Company; however, interest in river navigation continued and, in 1796-1797, the Dep and Haw River Company was chartered. Like its predecessor, the Deep and Haw River Company was unsuccessful in its efforts and, by 1800, had expended all funds in ineffective projects.<sup>3</sup>

No further efforts were made to improve transportation along the Cape Fear and Deep rivers until after the War of 1812, when interest in internal improvements was renewed across the State and the Nation. In North Carolina, interest was heightened by the increase seen in agricultural prices during this period. The need for more effective means of conveying agricultural

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products to market became apparent.<sup>4</sup> The leader of the internal improvements program in North Carolina was Archibald Debow Murphey, serving in the State Senate from 1812 to 1818. Murphey's concern for the improvement of river navigation formed an important segment in his scheme to create a self-sufficient state trade system. The largest rivers were to be made navigable by the construction of locks and canals, with a network of improved roads leading to and connecting these river trade systems. Ultimately, the river systems would funnel trade into two major ports, Wilmington and Beaufort. Betterment of channels at these ports would enable their development as external trade centers, thus lessening the State's dependence on ports in Virginia and South Carolina.<sup>5</sup>

The legislature accepted Murphey's internal improvement program, in part, and created a State Board of Internal Improvements to direct the program. An Englishman, Hamilton Fulton, was hired as state engineer to plan and supervise the program.<sup>6</sup> The legislature, meeting in 1815-1816, chartered the Cape Fear Navigation Company, in implementing the river improvement plan. The earlier Deep and Haw River Company was absorbed by the new company, with the new charter extending from the mouth of the Cape Fear upwards along the Deep and Haw rivers. Hamilton Fulton prepared the plans which the Cape Fear Navigation Company effected, proposing improvements from Wilmington north to Haywood (at the confluence of Deep and Haw rivers). Construction began in 1816, but ceased in 1819, canals were partially dug above Cross Creek and at Buckhorn, while a channel had been cleared near Wilmington. Bankruptcy was largely caused by the unanticipated difficulty and expense incurred in cutting the two canals. In 1823, the State bought additional stock in the company to keep it operating. By the late 1820s, however, no further attempts had been made to complete the canals and only the Lower Cape Fear River channel was maintained by the company.<sup>7</sup>

Interest in internal improvements waned until 1833, when another resurgence occurred. The development of the steam locomotive was largely the focus of this interest, and by 1840 two railroad systems in the State were complete: the Wilmington and Weldon Railroad and the Raleigh and Gaston Railroad. Business interests in Fayetteville and the Upper Cape Fear region, however, were bypassed by the new railroads. Again, the improvement of navigation along the Cape Fear River was considered. The Cape Fear and Yadkin Canal Company was chartered in 1846, proposing to link the two rivers by cutting a canal between them. Plans for digging the canal were abandoned, however, and no construction occurred.<sup>8</sup>

Fayetteville merchants undertook a study of the navigation potential of both the Cape Fear and the Deep rivers during the summer of 1848. The results of this study caused an abandonment of interest by the Fayetteville group. New economic developments in the Deep River region, however, caused an interest in

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navigation among residents there. As early as 1842, Denison Olmstead, a professor at the University of North Carolina, had reported the existence of coal deposits in the Deep River area. By the 1840s, commercial development of these resources was coming to the forefront of the State's concerns. Wilmington merchants, desiring a channeling of the coal through their city, joined with Deep River concerns and hired William B. Thompson, an engineer, to study the feasibility of a Cape Fear and Deep River transportation plan. Thompson recommended construction of locks, dams, and canals along the river.<sup>9</sup>

Accordingly, the Cape Fear and Deep River Navigation Company was chartered on January 24, 1849. William Thompson was retained as engineer for the project, but by 1851 completed the design for a system reaching from Fayetteville, on the Cape Fear River, north to Hancock's Mill, on the Deep River. Thompson's design outlined the construction of a dam, locks and canal at the Ramsey Mill site (Pullens Falls), which would later be known as Lockville. Construction began early in 1850, on the southernmost section of the Cape Fear. Financial problems plagued the company, as had been the case with earlier companies. Unlike the earlier companies, however, the Cape Fear and Deep River Navigation Company had the support of the State's legislature and prominent eastern businessmen, eager to gain the benefits from the coal deposits of the Deep River Valley. "Coal fever" was spreading throughout the State.<sup>10</sup>

By 1851, freshets had severely damaged the works under construction in the river. The remainder of 1851 saw little progress, as the contractors for the project were dismissed. Construction was not complete at any of the sites along the Cape Fear, and work in the Deep River section had not even begun. After dismissal of the contractors, construction continued under the supervision of Engineer Thompson.<sup>11</sup> Work upon the Pullens Falls (Lockville) section began in 1852.<sup>12</sup> As Thompson reported in 1848, Pullens Falls presented the greatest obstacle in achieving navigation of the Deep River. The engineer's scheme for conquering this obstacle involved the construction of two dams with locks along the actual falls upstream from the Lockville site. At this time, Thompson gave a detailed description of the works proposed at Lockville:

. . . a boat will pass into a pool formed by a dam, it will be 8 feet high and 446 feet long to the island, including the abutments. There also will be required 170 feet of damming to connect two other islands from the first.

From Pullens dam, it is intended to take out a canal through the level bottom in which his mill race is dug. It will be 1026 yards long, of easy excavation and will require one guard lock where it leaves the pool, and two lift locks of 10-1/2 feet each, to drop

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the boats into the river, somewhere about the new bridge, being erected by Dr. Smith and others. . . .

From the outlet lock of this canal the boats will float into a pool 11-1/2 miles long reaching to Buckhorn Falls. . . .<sup>13</sup>

The dams built at Pullens Falls, as well as the other sites along the rivers, were crib dams.<sup>14</sup> The locks were constructed as a modification of the composite lock.<sup>15</sup>

Financial problems continued to plague the company in the years 1852-1854; however, interest in the Deep River Coal deposits reached a peak at this time. Through a combination of mortgages and infusions of State monies, financing was maintained and construction continued. By 1854, northern speculators were continuing to invest in the coal mines and the first mining shafts were sunk. The navigation works were substantially completed as far inland as Haywood, in July of 1854, when winter freshets again damaged the sites. Edwin A. Douglas was hired to survey the sites and estimate the cost of their repair and completion, as Thompson was no longer in the service of the company.<sup>16</sup> Douglas recommended completion of the navigation system; however, the company was financially unable to resume construction. Eager to complete the works and begin the transport of coal along the river, the State gave the company \$300,000.00 in bonds and mortgaged the company. E. A. Douglas was retained as consulting engineer.<sup>17</sup>

The structures on the Cape Fear River was completed in 1855. In that year, however, it was apparent that the project had a growing number of critics. Criticism was partially superseded in February of 1856 by the discovery of a rich bituminous coal seam at the Egypt mine near Deep River.<sup>18</sup>

In June of 1856, Engineer Douglas reported that the timbers in the earlier constructed locks and dams were decaying, with several of the works leaking and unusable. Accordingly, repairs were made at sites all along the river by the contractor William Morrell. Decay at the Lockville site necessitated the replacement of the wooden lift locks with a stone structure. The steamer Brothers made the first commercial boat trip to Lockville, the most inland navigable point in the system, in July 1856. The success was shortlived, however, as the navigation company again faced bankruptcy. Application for funds was made at the 1856 meeting of the legislature, as the \$300,000.00 appropriation made in 1854 was completely expended. Charges of mismanagement, faulty design and construction, and improper use of funds met this request, and the legislature subsequently adjourned, having taken no action on the funding request. For the next two years, the company floundered on the brink of bankruptcy. New engineers and contractors were hired during this period; however, little construction took place. Application for funds was again made

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to the legislature in 1858. The group was even less enthusiastic about the project than earlier and made no additional appropriations. To protect the State's monetary interest in the project, however, an act was passed for the State's purchase and control of the company. Subsequently, the State assumed ownership of the company on April 23, 1859.<sup>19</sup>

Elwood Morris of New Jersey, engineer for the Baltimore and Ohio Railroad, was appointed chief engineer by the State for the purpose of repairing the existing locks and dams. Morris began work on the project in April 1859.<sup>20</sup> Work on the Lockville site was done in March and April of 1860, when a serious defect in the stone lock was discovered. Morris repaired the water-tight lining at the head of the stone lock and filled several pits left along the canal floor.<sup>21</sup> By early 1860, Morris reported that timber rafts were slowing traveling through the river system, causing new problems.<sup>22</sup> Under ownership by the navigation company, millers were allowed to operate mills along the works, utilizing the water power channeled through the canals. Thus, when the gates were closed and the works used for navigation, the water power utilized by these mills was unavailable. "For the days that their mill was stopped at Lockville--Clegg & Bryan handed me a Bill at \$25 per day--which I refused to allow. . .," noted Morris in addressing Governor John Ellis about the problem. Governor Ellis then ruled that the gates should be opened along the canals and milling continued, which rendered several sites along the river virtually useless for navigation.<sup>23</sup> In 1860, it also became apparent that no coal boats would travel down the river. The coal supply, which had promised great wealth for the State, was essentially exhausted and the mines were abandoned. Morris completed repairs along the river shortly before November of 1860, when extensive flooding severely damaged the works. No further repairs were made to the navigation system, as the concerns of the Civil War became increasingly obvious. On February 3, 1861, the Legislature passed an act to sell the navigation works and Morris was ordered to cease work.<sup>24</sup>

In the following years, the properties comprising the navigation system were sold to several different owners. A large number of tracts, including the Lockville site, was purchased by the Deep River Manufacturing Company, beginning in 1868.<sup>25</sup> During the early 1870s, the Lobdell Car-Wheel Company purchased an interest in the Deep River Manufacturing Company. The Lobdell Company also owned the Endor iron furnace located a Cumnock, upriver from Lockville. The Lobdell Company, as a large interest holder, urged that the Deep River Company repair the works allowing the transportation of Buckhorn ore upriver to the Endor furnace. Thus, the Deep River Manufacturing Company repaired the Navigation Works along this limited stretch of river. The Lockville works operated as a part of this system until 1876.<sup>26</sup> Apparently, the Deep River Manufacturing Company had additional plans for the Lockville site, as is demonstrated in a map from that period. It appears that the site was selected for development as a manufacturing village: streets were laid

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out, housing lots divided, and tracts selected for the construction of a mill and a school.<sup>27</sup> The Lockville site was never developed in this manner, however, and in 1876 the Deep River Manufacturing Company sold all of its property to the American Iron and Steel Company.<sup>28</sup> The Lobdell Company closed the iron furnaces at Endor, at that time, due to a depression in the iron business. Thus, regular navigation on the river was halted.<sup>29</sup>

Under ownership by the American Iron and Steel Company, at least two facilities, a sawmill and a gristmill, were operating at Lockville in 1880.<sup>30</sup> During the 1890s, the American Iron and Steel Company began to fail and its properties were subsequently sold to the Virginia Trust Company in 1899.<sup>31</sup> The Lockville property was next purchased by the Lockville North Carolina Power Corporation in 1906.<sup>32</sup> No action was taken by this company to develop the water power available at the site.

A group of individuals, organized as the Moncure Manufacturing Company, purchased the Lockville property in 1920.<sup>33</sup> Utilizing the navigation canal site, the manufacturing company successfully developed the water power potential of the river by constructing a hydroelectric plant there. The Moncure Manufacturing Company "connected the old locks into a forebay for the electric plant, replacing the log dam with a concrete and rock structure, and installed a 1,300-horsepower."<sup>34</sup> Lines were extended to Pittsboro, where the town had constructed a small substation and distribution lines.<sup>35</sup>

By September 1922, the operation of the plant and the electrification of Pittsboro appeared imminent; and the Chatham Record warned its readers to "get your homes wired and be ready for no man seems to know at what time the juice may be flowing into your sitting room."<sup>36</sup> The wires were tested on Friday, September 29, and on September 30 at 7:15 p.m., the Lockville hydroelectric plant began delivering electricity to the town of Pittsboro.<sup>37</sup> Distribution of power from Lockville was expanded by the erection of additional lines, particularly after the mid 1920s, when Carolina Power and Light Company purchased the hydroelectric facility.<sup>38</sup>

The service capacity of the small Lockville plant gradually decreased as electrification technology grew. The construction of a steam electric plant by Carolina Power and Light Company, the Cape Fear plant at adjacent Moncure, marked a significant stage in the decline of the Lockville hydroelectric plant. Indeed, the erection of the Cape Fear plant heralded a transition occurring across the State, as the rainfall-dependent hydroelectric plants were replaced as primary suppliers of electricity by more dependable and productive steam plants.<sup>39</sup> The Lockville hydroelectric plant was subsequently sold to Wolf Summit Coal Company in 1962.<sup>40</sup>

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Throughout its varied history, the Lockville site has witnessed a changing society's need for water power. Cornwallis and his troops crossed the Deep River, during the late eighteenth century, when Ramsey's Mill utilized the stream flow in grinding grain. In the mid-nineteenth century, men attempted to control the water flow for navigation purposes. Electrification became a modernizing trend for the State in the early twentieth century, when the hydroelectric plant connected water power to electricity. As energy needs are again apparent, the Lockville site offers an important option in the reuse of its hydroelectric facility and continued use of water power on the Deep River.

FOOTNOTES

- 1 Henry A. London, An Address on the Revolutionary History of Chatham County (Sanford: Coal Printing Company, 1894), pp. 14, 19-20; Hugh F. Rankin, Greene and Cornwallis: The Campaign in the Carolinas, North Carolina Bicentennial Pamphlet Series, No. X (Raleigh: N. C. Division of Archives and History, 1976), p. 78, herein cited as Rankin, Greene and Cornwallis; and Wade H. Hadley and others, Chatham County, 1771-1971 (Durham: Moore Publishing Company, 1976), photographs and captions on unnumbered page immediately following 168. The mill and tavern, located at the Lockville site, were constructed by Ambrose Ramsey prior to the Revolutionary War and remained in existence until the early twentieth century. The locations of these two structures appear on an undated map, ca. 1870, entitled "Map of Lockville, N.C.," in the North Carolina Archives, Raleigh. In addition to owning the mill and tavern, Ramsey was a prominent local political figure, serving as a colonel in the state militia, a court justice, and a representative in the State legislature.
- 2 Rankin, Green and Cornwallis, pp. 80-82.
- 3 Elsie F. Russ, "The Cape Fear and Deep River Navigation Company, 1849-1873" (unpublished Masters thesis, Wake Forest University, Winston-Salem, 1970), p. 1-16, hereinafter cited as Russ, "Navigation Company."
- 4 Russ, "Navigation Company," p. 4
- 5 Hugh T. Leflet and Albert R. Newsome, The History of a Southern State, North Carolina (Chapel Hill: University of North Carolina Press, 1973), pp. 328-329, 334, 336-337.
- 6 Benjamin H. Latrobe was first offered the position of engineer in March 1818. He declined the position, yet gave considerable advise to the State on the construction of canals and recommended the hiring of an English or French engineer. William H. Hoyt, editor, The Papers of Archibald Murphey (Raleigh: E. M. Uzzell and Company, 1914), volume I, pp. 109-118.
- 7 Russ, "Navigation Company," pp. 4-8.
- 8 Russ, "Navigation Company," pp. 8-12.
- 9 Russ, "Navigation Company," pp. 15-19.

- 10 Russ, "Navigation Company," pp. 19-31.
- 11 Russ, "Navigation Company," pp. 35-41.
- 12 Russ, "Navigation Company," p. 154.
- 13 William B. Thompson, Report Upon the Cape Fear and Deep Rivers (Raleigh: Seaton Gales, 1848), pp. 6-71, hereinafter cited as Thompson, Report Upon the Rivers. A copy of this document is located in the North Carolina State Library, Raleigh. It appears, from the "Map of Lockville, N.C." cited earlier, that Pullen was operating the earlier-constructed Ramsey's Mill. The canal built at Lockville would then have been an expansion of the Ramsey/Pullen mill race. Bridge piers appearing to that date from this antebellum period remain standing at Lockville at this time.
- 14 Thompson, Report Upon the River, p. 11. As Thompson described the type of dam: "It is formed by longitudinal timbers, well secured to the rock, connected by crossties, with the down stream end of the ties kept at such an elevation above the upstream end, as will give the proper upstream slope of 2-1/1 feet horizontal to 1 foot vertical. These timbers will be of yellow pine properly hewed, and well tee-nailed together, and the intermediate spaces or cribs, well packed with stone. Upon timbers running length ways of the dam along the face of the up stream slope, will be laid the sheeting of 3 inch yellow pine plank, running up and down the slope, and well secured to these timbers by tee-nails."
- 15 Thompson, Report Upon the River, pp. 11-12. Thompson described the composite lock modification in the following manner: ". . . the walls will be formed of well hewed yellow pine timbers laid length ways of the Lock, 10 feet apart, connected by cross ties every 10 feet of their length. These cribs will be well packed with stone to the entire length of the Lock walls.

These Lock walls will rest upon timbers extending entirely across the Lock, laid close together, and upon which a double flooring will be laid to the extent of the Lock chamber, and the lining of the chamber will also be double.

The Locks will be 100 feet long in the chamber, by 18 feet width, and are calculated for boats 100 feet long and 2 feet draft--and 30 to 40 tons burden. . . . The depth provided for in this estimate is in no case less than 3 feet. . . ."

- 16 Russ, "Navigation Company," pp. 41-52. Edwin Douglas, as a young engineer, began working on the upper division of the Lehigh Canal in 1835, under Josiah Wyatt. He continued with the Lehigh Canal and Navigation Company, in various facilities, until his death in 1859. Douglas served as superintendent of the Lehigh and Susquehanna Railroad while working as a consultant for the Cape Fear and Deep River Navigation Company. Information on Douglas was provided by Mr. Stene Humphries, Lehigh Canal Museum.
- 17 Russ, "Navigation Company," pp. 52-62.
- 18 Russ, "Navigation Company," pp. 64-65.
- 19 Russ, "Navigation Company," pp. 67-111.
- 20 Russ, "Navigation Company," pp. 112-113.
- 21 Noble J. Tolbert, editor, The Papers of John Willis Ellis (Raleigh: State Department of Archives and History, 1964), volume 2, pp. 403-417 passim, hereinafter cited as Tolbert, John Ellis Papers.
- 22 Russ, "Navigation Company," p. 117.
- 23 Tolbert, John Ellis Papers, pp. 417-443 passim.
- 24 Russ, "Navigation Company," pp. 120-121.
- 25 Chatham County Deed Books, Office of the Register of Deeds, Chatham County Courthouse, Pittsboro, Deed Book AU, p. 245, hereinafter cited as Chatham Deed Book.
- 26 J. A. Holmes and others, Papers On the Water Power in North Carolina (Raleigh: Guy V. Barnes, 1899), Bulletin Number 8 of the North Carolina Geological Survey, 129, hereinafter cited as Holmes, Waterpower in N.C.
- 27 "Map of Lockville, N.C.," undated (ca. 1870), located in the North Carolina Archives, Raleigh.
- 28 Chatham Deed Book AU, p. 245.
- 29 Holmes, Waterpower in N.C., p. 129.
- 30 Tenth Census of the United States, 1880: North Carolina - Chatham County, Industrial Schedule; Holmes, Waterpower in N.C., p. 159.

- 31 Chatham Deed Book D-B, p. 450.
- 32 Chatham Deed Book E-D, p. 41.
- 33 Chatham Deed Book F-P, p. 482.
- 34 The Chatham Record (Pittsboro), September 20, 1962, hereinafter cited as Chatham Record
- 35 Chatham Record, September 20, 1962
- 36 Chatham Record, September 22, 1962
- 37 Chatham Record, October 6, 1962
- 38 Chatham Record, September 20, 1962; Jack Riley, Carolina Power and Light Company, 1908-1958 (Raleigh: Edwards and Broughton, 1958), frontispiece.
- 39 Chatham Record, September 20, 1962
- 40 Chatham Deed Book 304, p. 215.

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