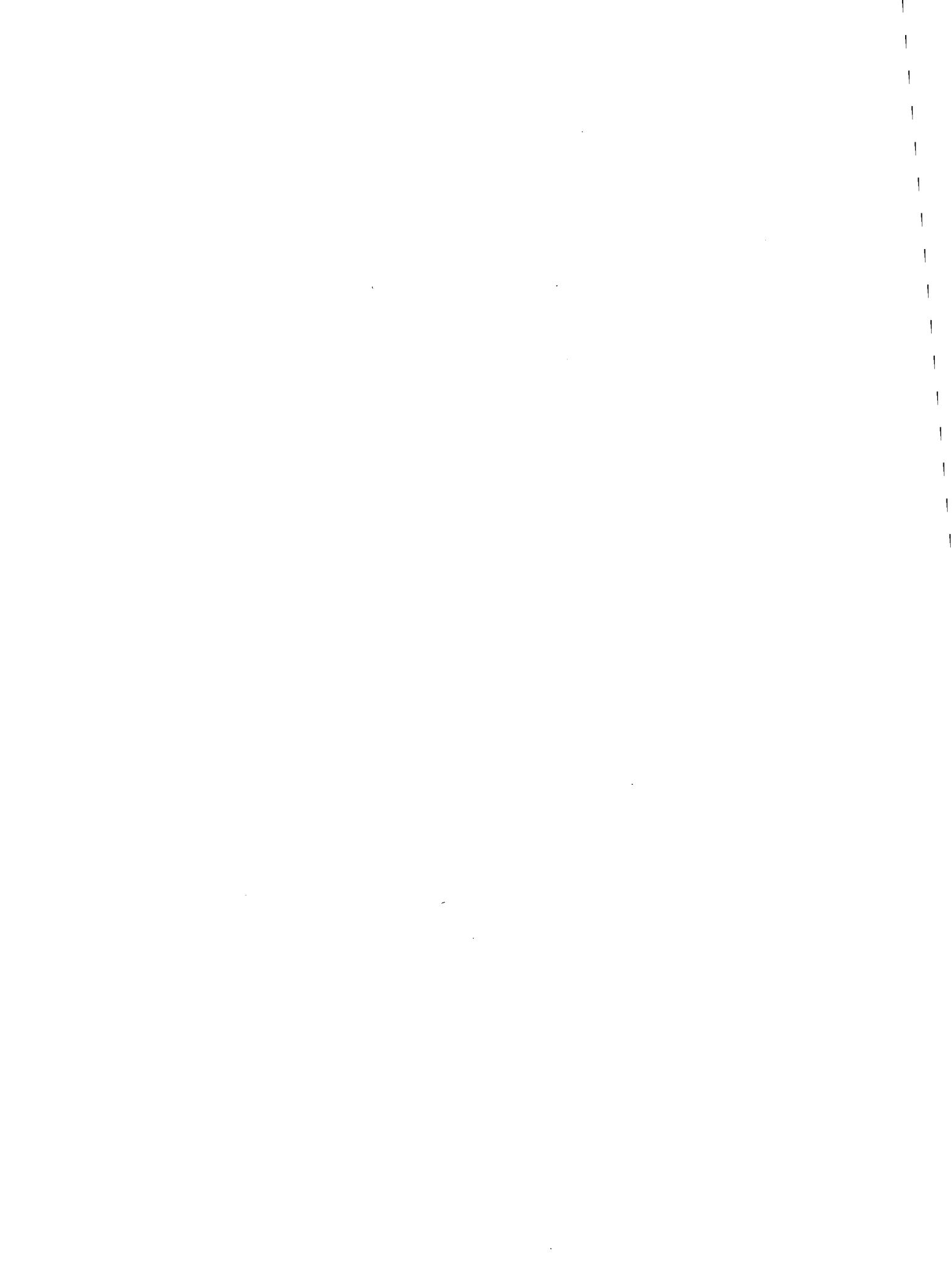


**HISTORIC RESOURCE STUDY
CHESAPEAKE & OHIO CANAL NHP**

8.

**COMMERCE ON THE
C & O CANAL
1830–1924**

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I. COMMERCE ON THE CHESAPEAKE & OHIO CANAL: 1830–1850

The commerce on the canal during the years 1830 to 1850 was almost wholly the transportation of agricultural produce, the least majority of which descended the waterway from the fertile farm-lands of Montgomery, Frederick and Washington Counties. As long as this continued, the company was barely able to meet expenses, and all hopes of the promoters had to be expressed in terms of future prospects. The canal board preferred to point to the great lumber and coal resources of the upper valley and the valuable trade to and from the West, which would boost the canal's profits once the waterway was completed to Cumberland. When comparisons had to be made with other canals, the directors used the successful Erie and British waterways as the measure of the future prospects of their canal. In the second annual report to the stockholders in June 1830, President Charles B. Mercer voiced these sentiments:

Two commodities alone, coal and iron, the transportation of which supplies the chief source of revenue to the most profitable Canals of Scotland and England, are found in inexhaustible quantities near the very line of the latter Canal (Chesapeake & Ohio), while they have not yet been discovered, to any very great extent, if at all, on the Erie Canal of New York. The mineral productions of a country whose surface is comparatively flat and unbroken, cannot be expected to rival, in variety or quantity, those of a region so diversified by mountains and valleys, as the country watered by the Potomac, the Youghiogheny and their tributary streams; some of which, like the Shenandoah and the Monongahela, surpass, themselves, in the actual length of their practical navigation.¹

Nevertheless the company did not ignore the river trade, keeping the Potomac Company's locks and canals in repair and operation until its own works were completed.²

A. TARIFFS OF TOLL, 1830–1850

On October 10, 1830, some three weeks before the canal between Lock Nos. 5 and 23 were opened to navigation, the board fixed the tariffs of tolls at the same rate as the Potomac Company had charged at Great Falls.³ These tolls were as follows:

ARTICLE	UNIT	TOLL
Domestic spirits	Hogshead	1/6
Tobacco	Hogshead	1/0
Linseed oil	Cask	1/3
Wheat, peas, beans, flax seed	Bushel	0½
Corn	Bushel	0¼
Flour	Barrel	0/3
Beef	Barrel	0/4

¹ *Second Annual Report* (1830), C & O Canal Co., 15.

² *Proceedings of the President and Board of Directors*, A, 312–313, 342, B, 30.

³ *Ibid.*, B, 194. As early as August 21, 1828, the canal board had voted to continue the tariff of tolls previously established by the Potomac Company on all of the locks and skirting canals that were still in operation. The only modifications in those rates were those made to help the contractors building the Chesapeake & Ohio. On August 21, it was determined that granite stone could be taken through the Little Falls locks at 3 cents per perch. After much pressure from the contractors, the board on August 30 decided to allow all building materials and provisions to pass the old Potomac Company locks and canals free of charge. *Ibid.*, A, 44–45, 54.

Pork	Barrel	0/6
Hemp, flax, potash	Ton	2/6
Mfd. Iron; copper, lead, etc. (ores)	Ton	2/0
Iron ores and stone	Ton	0/5
Lime	Bushel	1/3
Coal	Chaldron	0/5
Staves (hhds. And bbls.)	Hundred	0/2¼, 0/1½
Plank	Hundred feet	0/10
Timber	Hundred feet	0/5½
Packaged goods	Hundred weight	0/1½
Boats	Each (except empties returned)	2/6 ⁴

Although a committee was appointed to consider a modification of the tariffs of tolls on December 21, 1831, little was done until the spring of 1834 when the canal was opened to Harpers Ferry.⁵ April 4, the board established the first comprehensive rates of tolls. These rates were as follows:

ARTICLE	UNIT, per ton of	Toll, per mile	
		1 st 15 mi.	thereafter
Tobacco	2 hogsheads	2¢	
Wheat, corn, meal, rye chop, flax seed, clover seed	40 bushels	2¢	
Oats	80 bushels	2¢	
Mill Offal	100 bushels	2¢	
Flour	10 bushels	2¢	
Potatoes	35 bushels	2¢	
Salt	35 bushels	2¢	
Apples	12 bushels	2¢	
Cider, ale, beer	8 barrels	2¢	
Whiskey, pork	7 barrels or 2 hogsheads	2¢	
Hammered, Rolled iron	2,240 pounds	2¢	2¢
Steel, lead, other metals	2,240 pounds	2¢	2¢
Bacon	2,240 pounds	2¢	2¢
Slaughtered hogs, other meat	2,240 pounds	1½¢	1½¢
Livestock	30 sheep, 15 hogs or 3 cattle	2¢	2¢
Shad, herring	600 shad or 4,000 herring	2¢	1¢
Oysters	4,000 or 28 bushels	2¢	1½¢
Salted or pickled beef, pork, fish	7½ barrels	2¢	1½¢
Ale, beer, cider	8 barrels or 2 hogsheads	2¢	2¢
Whisky, Domestic spirits	8 barrels or 2 hogsheads	2¢	2¢
Wine, Foreign spirits	8 barrels or 2 hogsheads	2¢	2¢

⁴ U.S. Congress, Senate, *Documents Relating to the Chesapeake & Ohio Canal*, S. Doc. 610, 26th Congress, 1st Session, 1840, 80-81, 105-106.

⁵ *Ibid.*, C, 17, and *Niles' Register*, Vol. XLVI (April 19, 1834), 119. The only two changes in the toll schedule recorded between 1831 and 1834 occurred in October 1831. The toll on stone was set at 1 cent a perch per mile, while the rate on empty freight boats or scows ascending the canal was put at 5 cents a mile.

Salt	45 bushels, fine or 38 bushels, coarse	1½¢	1½¢
Plaster (stone)	2,240 pounds	1½¢	1¢
Plaster (ground)	28 bushels	1½¢	1¢
Grind Stones, Mill Stones	15 cubic feet	2¢	2¢
French Burrs (in blocks)	15 cubic feet	1½¢	1½¢
Bricks, tiles, roofing slates	500 bricks or tiles, 800 slates	1¢	1¢
Coal	28 bushels	1¢	½¢
Hay, straw	2,240 pounds	2¢	1¢
Pig, cast and bar iron	2,240 pounds	2¢	2¢
All other articles	2,240 pounds	2¢	2¢

In addition to these rates for articles, tolls were also levied on the boats that plied the canal. Boats or scows, either empty or having cargos on which tolls amounted to less than 5 cents per mile, were to be charged at the rate of 5 cents per mile for the first 15 miles and 3 cents per mile for any additional distance. Boats used principally for passenger transportation were to pay 10 cents per mile for the first 15 miles and 8 cents per mile thereafter. The tolls on the packets included the toll on the passengers and their baggage, but all other merchandise was to be charged the established rates.

These toll rates applied to both the use of the canal and that of the river from Dam No. 1 to Dam No. 3. For the privilege of navigating the river above Harpers Ferry, the old Potomac Company tolls were to be charged.⁶

The year 1835 saw a revised list of changes put into effect. On January 28 the board extended the 1834 rate of tolls to that portion of the canal between Harpers Ferry and Dam No. 5.⁷ Shortly thereafter a committee was appointed to revise the tariff of tolls, and their recommendations were adopted with some modifications by the directors on April 23.⁸ The new toll rates, which were to take effect on July 1, were as follows:

ARTICLE	UNIT, Per ton of	Toll, per mile	
		1 st 15 mi.	Thereafter
Wheat, Rye, Barley, Buckwheat, Indian Corn	40 bushels	2¢	1½¢
Flour	10½ barrels	2¢	1½¢
Corn Meal	45 bushels	2¢	1½¢
Bran, Shorts, Mill Offal	100 bushels	2¢	1½¢
Oats, Corn on Ear	80 bushels	2¢	2¢
Tobacco, unmanufactured	2½ hogsheads	2¢	1½¢
Flax, Seed, Grass Seeds	40 bushels	2¢	2¢
Dried Apples, Peaches	45 bushels	2¢	2¢
Apples, Peaches, not dried	40 bushels or 14 barrels	2¢	2¢
Potatoes, Turnips	40 bushels	1½¢	1½¢
Hemp, Flax	2,240 pounds	2¢	2¢
Hay, Straw	2,240 pounds	2¢	1¢
Firewood (in boats)	Cord of 128 cu. Ft.	1½¢	½¢

⁶ *Proceedings of the President and Board of Directors*, D, 67-69.

⁷ *Ibid*, D, 226.

⁸ *Ibid*, D, 279, 284.

Bark (in boats)	Cord of 128 cu. Ft.	2¢	3/4¢
Wood, Bark (in rafts)	Cord of 128 cu. Ft	4¢	1½¢
Boards, Plank (in boats)	1,000 feet b.m.	2¢	1¢
Plaster	28 bushels	1½¢	1¢
Fish	7 barrels	2¢	1¢
Wood	Coed of 128 cu. Ft.	2¢	½¢
Bark (tanners)	Cord of 128 cu. Ft.	3¢	1¢
Lumber, Plank (in boats)	1,000 feet b.m.	2¢	1¢
Lumber, Square timber (in boats)	70 cubic feet	2¢	1¢
Shingles (in boats)	3,000 cubic feet	2¢	1¢
Staves and Headings (in boats)	1,000 cubic feet	2¢	1¢
Barrels, Hogsheads (in boats)	500 cubic feet	2¢	1¢
Above five items if in rafts		2¢	2¢
Charcoal and Coke	56 bushels	2¢	1¢

In addition to these rates, tolls were to be charged on various types of boats. Packet or pleasure boats used chiefly for the transportation of people were to pay 8 cents per mile for the first 15 miles and 4 cents per mile thereafter. This rate included the baggage of the passengers, but all other articles on these boats would be charged the established tolls. All other vessels plying the waterway—freight boats, gondolas, scows—were to pay, in addition to the established tolls, 4 cents per mile for the first 15 miles and 2 cents per mile thereafter.⁹

The 1835 toll rates were the first to require ratification by commissioners appointed by the State of Maryland. The commission had been established pursuant to a resolution passed by the General Assembly during the 1834 December Session “regulating the tolls of the Chesapeake & Ohio Canal Company and of the Baltimore and Susquehanna Rail Road Companies.” Accordingly, the new rates were submitted to the commissioners who quickly approved them.¹⁰

Several weeks before the new rates were to take effect, John P. Smart, who owned a mill in Virginia, complained against the company policy of charging for the use of the Potomac between his mill and Guard Lock No. 2. After discussing the matter, the board on June 15 determined that after July 1 no tolls would be charged for the use of the river. The only two exceptions to this ruling were: (1) the improved 3½-mile pool where slackwater navigation in the Potomac bed was technically a part of the canal above Dam No. 4 and (2) instances where boats using the river passed guard or river locks through which they could enter the canal. In the case of the latter, the same toll would be charged for the use of the river as was established for the use of the corresponding portion of the canal. If the navigation of the waterway was ever suspended, no tolls were to be charged for boats using the river opposite the obstructed portion of the canal.¹¹

Another major revision in the tariff of tolls occurred on March 15, 1841 when the directors raised the charges on the major agricultural products and provisions to a flat 2 cents a ton per mile. The tariff on coal and lime remained at 1 cent a ton per mile. The new rates, which were to take effect on April 30, were as follows:

ARTICLE	UNIT, Per ton of	Toll, per mile	
		1 st 15 mi.	Thereafter
Wheat, Rye, Barley, Buckwheat,	40 bushels	2¢	1½¢

⁹ *Ibid*, D, 284-286.

¹⁰ *Ibid*, D, 287.

¹¹ Ingle to O'Reilly *et al.*, June 26, 1835, Ltrs. Sent, C & O Co., and *Proceedings of the President and Board of Directors*, D, 333-334.

Indian Corn			
Flour	10½ barrels	2¢	1½¢
Corn Meal	45 bushels	2¢	1½¢
Bran, Shorts, Mill Offal	100 bushels	2¢	1½¢
Tobacco (unmanufactured)	2½ hogsheads	2¢	1½¢
Potatoes, Turnips	40 bushels	2¢	2¢
Hay, Straw	2,240 pounds	2¢	2¢
Mineral Coal	28 bushels	1¢	½¢
Lime	28 bushels	1¢	½¢
Timber, Round or square (in boats)	50 cubic feet	1¢	½¢
Shingles, Plasterer's Laths (in boats)	3,000 shingles or 5,000 laths	2¢	1¢
Staves, Headings (in boats)	1,000 barrels or 500 hogsheads	2¢	1¢
Hoop Poles (in boats)	1,000 barrels or 500 hogsheads	2¢	1¢
Fence Rails, Posts (in boats)	1,000 barrels or 500 hogsheads	1¢	½¢
Above 5 items in rafts	Double the rate for those in boats		
Charcoal and Coke	56 bushels	2¢	1¢
Stone (rough)	Perch of 25 cu. Ft.	1¢	½¢
Limestone	Perch of 25 cu. Ft.	1/3¢	1/3¢
Marble, Other stone (wrought or cut)	15 cubic feet	2¢	2¢
Iron Ore, Other metallic ore	2,240 pounds	½¢	½¢
Pig, Scrap iron	2,240 pounds	1¢	1¢
Iron castings	2,240 pounds	1½¢	1½¢

With the exception of these changes, the tariff approved in 1835 was to remain in effect.¹²

In an effort to spur trade, the directors reduced the tolls on plaster and coal in April 1842. The rate for plaster was reduced from 2 cents a ton per mile to 1½ cents a ton per mile for the first 20 miles and to 1 cent a ton per mile for the remaining distance. The charges on coal were reduced from 1 cent to 2/3 cent a ton per mile. The toll on coal was lowered as a result of the lower rates on coal on the Pennsylvania canals and the relatively cheap price of coal from Richmond, Virginia, that had recently appeared for sale in the District cities.¹³

In May 1843 the canal board received a series of reports concerning the advantages to trade on the waterway that would be gained by a reduction of the 1841 modifications back to the approximate levels of 1835. A major stimulus to such a reduction was the increasing competition of the Baltimore & Ohio Railroad, which had been completed to Cumberland in 1842. Accordingly, a revised tariff of tolls was approved by the board and the Maryland commissioners. The new rates, which went into effect on June 20, were as follows:

ARTICLE	UNIT, Per ton of	Toll, per mile	
		1 st 20 mi.	Thereafter
Flour	10 barrels	2¢	1½¢
Wheat, Rye, Barley, Buckwheat	40 bushels	2¢	1½¢
Flax Seeds, Grass Seeds	40 bushels	2¢	1½¢
Indian Corn	40 bushels	1½¢	1½¢
Corn Meal	45 bushels	2¢	1½¢
Dried Apples, Peaches	45 bushels	2¢	1½¢

¹² *Proceedings of the President and Board of Directors*, F, 295–296.

¹³ *Fourteenth Annual Report* (1842), C & O Co., 5.

Apples, Peaches (not dried)	40 bushels or 14 barrels	2¢	1½¢
Tobacco (unmanufactured)	2½ hogsheads	2¢	1½¢
Hemp, Flax	2,240 pounds	2¢	1½¢
Bacon	2,240 pounds	2¢	1½¢
Hammered, Rolled Iron, Steel, Lead, Metals	2,240 pounds	2¢	1½¢
Marble, Stone (wrought or cut)	15 cubic feet	2¢	1½¢
Grind Stones, Mill Stones	15 cubic feet	2¢	1½¢
Livestock	30 sheep, 15 hogs or 3 cattle	2¢	1½¢
Pleasure Carriages, Horses	2 2-wheeled, 1 4-wheeled, or 2 horses	2¢	1½¢
Window Glass	2,800 feet	2¢	1½¢
Furniture	100 cubic feet of space occupied	2¢	1½¢
Ale, Beer, Cider, Whiskey, Domestic Spirits	8 barrels or 2 hogsheads	2¢	1½¢
Wine, Foreign Spirits	220 gallons	2¢	1½¢
Salted, Pickled Beef, Pork, Fish	8 Barrels	2¢	1½¢
Oysters	4,000 or 28 Bushels	2¢	1½¢
Potatoes, Turnips	40 bushels	1½¢	1½¢
Bran, Shorts, Mill Offal	100 bushels	1½¢	1½¢
Slaughtered Hogs, Meats	2,240 pounds	1½¢	1½¢
Iron Castings, Bloom Iron	2,240 pounds	1½¢	1½¢
French Burrs (in blocks)	15 cubic feet	1½¢	1½¢
Oats, Corn in ear	80 bushels	2¢	1¢
Hay, Straw	2,240 pounds	2¢	1¢
Shad, Herrings	600 shad or 4,000 Herrings	2¢	1¢
Salt	45 bushels (fine) or 32 bushels (coarse)	1½¢	1¢
Plaster	2,240 pounds (stone) or 28 bushels (ground)	Free	Free
Bricks, Tiles, Roofing Slates	500 Bricks or tiles, or 800 Slates	1¢	1¢
Carts, Wagons, Plows	2 carts, 1 wagon or 10 ploughs	1¢	1¢
Ice	2,240 pounds	1¢	1¢
Pig, Scrap Iron	2,240 pounds	1¢	1¢
Lime	28 bushels	1¢	½¢
Timber (round or square), in Boats	70 cubic feet	1¢	½¢
Fence Rails, Posts, in Boats	100 Rails or posts	1¢	½¢
Rough Stone (except Limestone)	Perch of 25 cubic feet	1¢	½¢
Bark, in Boats	Cord of 128 cubic feet	1¢	¾¢
Boards and Plank, in Boats	1,000 feet, B.M.	1¢	¾¢
Shingles, Plasterer's Laths, in Boats	3,000 shingles or 5,000 laths	1¢	¾¢
Staves and Heading, in Boats	1,000 barrels or 500 Hogsheads	1¢	¾¢
Hoop poles, in Boats	1,000	1¢	¾¢
Charcoal, Coke	56 bushels	1¢	¾¢

Firewood, in Boats	Cord of 128 cubic feet	1¢	¼¢
Iron Ore, Metallic Ores	2,240 pounds	½¢	½¢
Mineral Coal	28 bushels	½¢	½¢
Limestone	Perch of 25 cubic feet	¼¢	¼¢
Dry Goods, Groceries, Crockery, Glassware, Sundries	8 barrels, 4 Tierces, 2 hogsheads or 40 cubic feet in bundles, bales, crates or boxes	2¢	1½¢

In addition to these rates, packets and pleasure boats used chiefly for the transportation of passengers were to be charged 8 cents per mile for the first 20 miles and 4 cents for any additional miles, the toll covering all passengers and their customary baggage. Freight boats, gondolas and scows were to pay 4 cents per mile for the first 20 miles and 2 cents per mile thereafter. Timber, fence rails, posts, bark, boards, plank, shingles, lath, staves and heading, hoop-poles and firewood, when transported in rafts, were to pay double the rates as when carried in boats.¹⁴

The tariff of tolls, which took effect on June 20, 1843, remained in effect with some slight modifications (which will be cited later in this chapter) until after the canal was opened to Cumberland in October 1850.

B. ANALYSIS OF CANAL TRADE DURING THE CONSTRUCTION YEARS, 1830–1850

The agricultural nature of canal trade, which was indicated by the toll schedules and testified to by the company officials, was also demonstrated by the annual analysis of trade on the waterway as well as by newspaper and periodical accounts. Throughout the 20-year period from the opening of the canal between Little Falls and Seneca Falls in November 1830 until its final completion to Cumberland in October 1850 the chief articles transported were flour, wheat, corn and other agricultural products. Lumber, lime, stone and some coal were also shipped in varying quantities. Although consistent and detailed listings did not begin until 1842, by which time the canal had already reached Dam No. 6, the extant company records and other accounts are sufficient to establish the fact that the canal was heavily dependent on the agricultural production of the Potomac Valley for its trade during the construction period.¹⁵

Trade grew slowly before the canal was completed to Cumberland in 1850. After the initial enthusiasm of 1831, the total business on the canal decreased the following year and remained stationary until 1837. Beginning in 1838 the pace of trade increased annually, doubling within four years to over 60,000 tons in 1841. Thereafter commerce leveled off and fluctuated irregularly about the new level. In the four years prior to the completion of the canal, business on the waterway again increased to 71,440 tons in 1847, 86,436 tons in 1848, 102,041 tons in 1849 and 101,950 tons in 1850. During the late 1840s, the ascending trade accounted for some 16 to 23 percent of the annual commerce on the waterway, while the descending trade comprised some 77 to 84 percent.¹⁶

¹⁴ *Fifteenth Annual Report* (1843), C & O Co., 13–14.

¹⁵ For a copy of the available listings of ascending and descending trade on the canal from 1831 to 1850, see Appendix A. It is interesting to note that in 1851 the company destroyed waybills and toll returns for the period prior to 1847, inasmuch as the accounts were closed and the papers were "of no value for future reference." *Proceedings of the President and Board of Directors*, H, 449.

¹⁶ See Appendices A and D.

1831

Almost as soon as the canal was opened to navigation between Locks Nos. 5 and 23, numerous boats, filled with agricultural produce, began plying the waterway. The *Frederick Town Herald* reported on January 15, 1831:

Very recently forty-five boats passed through the locks (Nos. 15-20) of the 17th and 18th sections in one day, laden with more than 6,000 barrels of flour, part of which descended by the Shenandoah, from Port Republic, a point within 20 miles of Stanton, the geographical center of Virginia; and another from Williamsport, in Maryland, 100 miles above the District of Columbia; and wood, for fuel, has already been brought down the canal a distance of 16 miles, from above the Great Falls of the Potomac.¹⁷

Within ten days after the canal was watered to within a few hundred yards above the Georgetown boundary in March 1831 some 30,000 barrels of flour "with much other merchandise" had descended the waterway.¹⁸ According to various accounts, the original reason for the heavy movement of flour from Seneca to Georgetown was that the cost for its transportation had dropped from \$1 to 30 cents a barrel by January 13 and to 7 cents a barrel, including tolls, by early April.¹⁹ From March 21 to May 14, it was reported that 83,106 barrels of flour descended the canal, and from June 1 to the close of navigation in November the total was 71,172.²⁰

An analysis of the ascending and descending trade from June 1 until the close of navigation in November demonstrates the almost total dependence of the canal on the agricultural produce of the Potomac Valley during its first full year of operation. Among the major products brought down the canal during this 6-month period were the following:

Flour	71,172 barrels
Bran, Shorts, etc.	10,003 bushels
Wheat	4,745 bushels
Corn	2,145 bushels
Hemp and Flax	5,240 pounds
Hogs	5,000 pounds
Lard and butter	2,460 pounds
Bacon	1,700 pounds
Whiskey	1,472 barrels
Leather	7,790 pounds
Coal	906 bushels

On the other hand, the only products listed for the ascending trade were:

Fish	183 barrels
Salt	901 bushels
Plaster	51½ tons

¹⁷ *Frederick Town Herald*, January 15, 1831.

¹⁸ *Niles' Register*, Vol. XL (April 9, 1831), 95.

¹⁹ Lee to Mercer, Jan. 13, 1831, Ltrs. Recd., C & O Co., and *Niles' Register*, Vol. XL (April 9, 1831), 91.

²⁰ *Niles' Register*, Vol. XL (July 2, 1831), 307, and *Fourth Annual Report* (1832), C & O Co., Appendix B, 20 ff.

The heavy dependence of the canal upon its descending agricultural trade for revenue would remain a consistent factor in the commerce of the waterway until its completion to Cumberland in 1850.²¹

1832

The year 1832 witnessed a continuation of the heavy transportation of flour down the waterway that for the year was \$32,992.66, a sum that would not be reached again until 1838.²² Moreover, the board was encouraged by a report that the proprietor of a Georgetown lumber mill was preparing 10,000 cords of wood above Great Falls to be taken down the canal. It was predicted that this shipment of wood on the waterway would be the harbinger of a new flourishing trade.²³ During the month between February 12 when the navigation was resumed and March 10, 27,638 barrels and 194 half barrels of flour had been unloaded in Georgetown.²⁴ By May 31 the total number of barrels of flour received at Rock Creek Basin had risen to 91,224.²⁵

The listings for the ascending and descending trade on the canal again showed the large volume of agricultural produce traveling down the canal and the relatively light commerce moving up the waterway. The principal products descending the canal between February 12 and May 31 (the only extant records for the year) were as follows:

Flour	91,224 bushels
Bacon	82,500 pounds
Bran, Shorts, etc.	9,002 bushels
Lard and butter	11,121 pounds
Hemp and Flax	8,900 pounds
Wheat	8,093 bushels
Corn	1,745 bushels
Whiskey	1,631 barrels
Rye and Chop	1,281 bushels
Stone	5,377 perches

Again, as in 1831, only three articles were listed for the ascending trade:

Fish	1,023 barrels
Salt	705 bushels
Plaster	305 ¾ tons

Although the statistics for the ascending trade show that they accounted for a very small proportion of the total commerce, there was some encouragement in that the amounts of fish and plaster shipped up the canal increased six-fold while that of salt decreased by some 20 percent.²⁶ All

²¹ *Fourth Annual Report* (1832), Appendix B, 20 ff.

²² *Report to the Stockholders on the Completion of the Chesapeake & Ohio Canal to Cumberland* (Frederick, 1851), Appendix K, 152.

²³ *Proceeding of the Stockholders*, A, 177.

²⁴ *Niles' Register*, Vol. XLII (March 31, 1832), 82.

²⁵ *Fourth Annual Report* (1832), Appendix B, 20 ff

²⁶ *Ibid.*

told, the initial enthusiasm of 1831 declined somewhat as the total amount of tolls collected fell some \$8,000 to \$24,986.02.²⁷

1833

There are no statistics available concerning the amount of articles carried in the ascending or descending trade on the canal for the year 1833. However, according to the *Georgetown Gazette* on May 24, 1833, there was a brisk trade on the waterway:

It is with real pleasure we announce that the canal and locks, as far as the eye can reach from Georgetown towards Crommelin, is literally covered with boats as close as they can stow, filled with flour and other produce. Not less than 15,000 barrels passed through the locks into the basin yesterday, more than 150 boats it is said, were above the town, coming down.²⁸

Despite this early report of optimism, the canal trade for the entire year was greatly reduced as evidenced by the decline in tolls from \$24,976.02 in 1832 to \$16,663.49 in 1833.²⁹ This decline in trade was due partially to the obstruction of the Potomac navigation by the works above Harpers Ferry, but, more importantly, it was the result of a poor wheat crop in the valley. Recognizing the intimate relationship between canal trade and local agricultural prosperity, the board warned the stockholders in June 1833 that:

The revenue of the canal, like the commerce of the District of Columbia, will be ever subject to such fluctuation, till its tonnage rests on a foundation less mutable, than the wheat crops of the upper country, a single agricultural product, subject to annual variations of quality as well as quantity, with the change of the seasons.

In the minds of the company officials such problems would be solved when the canal reached the rich coalfields and vast timberlands of western Maryland.³⁰

1834

There are no statistics available concerning the amount of commodities carried on the ascending or descending trade of the canal for 1834. However, the amount of tolls collected rose from \$16,663.49 in 1833 to \$20,131.62 in 1834, indicating some improvement in commerce but still well below the peak year of 1831 when \$32,992.66 had been collected. The increase of trade in 1834 can be partially attributed to the formal opening of the canal to Harpers Ferry in November 1833, thus permitting the waterway to tap the commerce of the Shenandoah Valley. Despite the slight improvement in trade the directors were disappointed as they had expected a great increase of trade once the canal reached Harpers Ferry.³¹

²⁷ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

²⁸ *Georgetown Gazette*, May 24, 1833.

²⁹ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

³⁰ *Fifth Annual Report* (1833), C & O Co., 10–11. There are no statistics available for the amount of articles carried in the ascending or descending trade of the canal from 1833 to 1841.

³¹ *Sixth Annual Report* (1834), C & O Co., 3–5; *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152; and *Niles' Register*, Vol. XLV (November 23, 1833), 199.

1835

The year 1835 witnessed both encouraging and discouraging prospects for the canal trade. In April the waterway was opened to Dam No. 5, and it was reported that the Williamsport Basin was crowded "with boats, arks, &c. laden with coal and flour."³² By mid-April it was observed that business on the canal was thriving, the first boat having arrived at Rock Creek Basin loaded with 359 barrels.³³ In late April it was noted that the canal was in excellent navigable order all the way to Dam No. 5 and already sixty boats had passed through Lock No. 43 on their way down the canal.³⁴

The canal board exhibited a new mood of optimism at the annual stockholders' meeting in June when it discussed the increasing prospects for trade. They noted that the

evidence of increasing trade are daily multiplying, and from sources which have heretofore, been alien to us. Already have the agricultural products and manufactured iron of Pennsylvania been brought to the canal at Williamsport, as the readiest and cheapest mode of conveyance to ports for transshipment to Eastern markets.

Coal properties in Allegany County were already rising in price in anticipation of the canal reaching Cumberland. When the waterway reached Cacapon River, it would be able to tap one of the heaviest timbered areas on the Potomac. In addition to these sources of descending trade was the prospect of the increasing demand for fish, gypsum and salt in the upper valley that would boost the ascending trade.³⁵

Despite these encouraging prospects, the increase in trade was limited by a poor grain harvest in the Potomac Valley. Accordingly, the total amount of tolls collected rose only by some \$6,400 to \$26,568.15, still well below the peak year of 1831.³⁶

1836

Trade on the canal during 1836 rose slightly as the amount of tolls collected increased to \$28,769.33.³⁷ When navigation opened in spring the descending flour trade was brisk. In the first week of April, 8,106 barrels of flour descended the canal and the average daily tolls were reported to be \$800.³⁸ However, the worst grain harvest in the Potomac Valley in many years that summer again curtailed the growth of commerce on the waterway. In a special report to Governor Thomas W. Veazey on February 4, 1837, President George C. Washington wrote:

The unprecedeted failure of the agricultural products of the two years, 1835 and 1836, especially so the last has had a corresponding influence on the revenue of the canal derived from tolls. Until the final completion of the canal to Cumberland, when the vast and inexhaustible resources of that mineral region are brought into action, its chief reliance for revenue is to be derived from the products of the rich agricultural country bordering the Potomac and its tributaries.³⁹

³² *Niles' Register*, Vol. XLVIII (April 11, 1835), 89.

³³ *Ibid.* Vol. XLVIII (April 18, 1835), 113.

³⁴ *Ibid.* Vol. XLVIII (April 25, 1835), 134.

³⁵ *Seventh Annual Report* (1835), C & O Co., 10.

³⁶ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

³⁷ *Ibid.* and *Eighth Annual Report* (1836), C & O Co., 8.

³⁸ *Niles' Register* Vol. L (April 16, 1836), 113.

³⁹ Washington to Veazey, Feb. 4, 1837, Ltrs. Sent, C & O Co.. Also see *Ninth Annual Report* (1837), C & O Co., 10.

1837

The directors looked forward to a more profitable year of trade on the canal in 1837. The river locks at Edward's Ferry and opposite the mouth of Goose Creek were completed during the summer, this giving canal officials the hope that they could tap the trade of Loudoun County, Virginia, which bordered the Potomac for some 40 miles.⁴⁰ However, another poor grain harvest in the valley curtailed canal commerce for the third consecutive year; and the tolls collected fell some \$2,000 to \$26,702.49.⁴¹ Accordingly, President Washington again informed Governor Vazeley on December 23 that there had been no material change in the toll receipts of the company since the previous year:

their increase being as yet chiefly dependent on agricultural products, which for the past two years have failed to a lamentable degree throughout the whole extent of country bordering on the Potomac and its tributaries. These, and the various other articles for transportation on the canal, are considered as only auxiliary to the main source of revenue to be derived from the mineral regions of Maryland and Virginia...⁴²

1838

The year marked an upswing in canal trade as the result of an "unusually fine" and "abundant harvest" of grain crops throughout the Potomac Valley. The tolls collected by the company increased by over \$8,000 to \$34,958.55. Thus, commerce on the waterway showed a healthy upsurge of activity despite the nationwide economic dislocation caused by the Panic of 1837.⁴³

1839

The company officials looked forward to a prosperous business year on the canal in 1839. The section of the waterway between Dams No. 5 and 6 was opened to navigation in the spring. It was expected that this opening would produce a significant rise in both the ascending and descending trade since the new section connected with the National Road at Hancock. Furthermore, coal could be brought down the river to Dam No. 6 from where it could be loaded on to canal barges and taken down to the District cities.⁴⁴

During the early spring there was both good and bad news relative to the expansion of canal trade. In late April it was reported that already

several boats, freighted with potatoes, fish, salt and other merchandise, from the District (of Columbia) have passed through this one hundred and thirty seven miles of canal, to points on the river above the 6th dam.

At the same time it was observed that the water in the river was at such an unusually low level between Cumberland and Hancock that

⁴⁰ *Ninth Annual Report* (1837), 4.

⁴¹ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

⁴² *Tenth Annual Report* (1838), C & O Co., 7.

⁴³ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152, and *Tenth Annual Report* (1838), 12-13.

⁴⁴ *Tenth Annual Report* (1838), 13.

out of the seven coal boats which have left Cumberland lately, during a small rise in the river, but three reached the canal, the others being lost.⁴⁵

The board of directors informed the stockholders in June of the encouraging trade prospects of the canal. The amount of tolls collected was up over 25 percent over the previous year, and improvements could be seen in the number and size of the boats plying the waterway. New sources of trade were being developed which would enhance the canal revenues. Nevertheless, the company would be unable to show a profit until the canal reached the main source from which its prosperity was to be derived—the coal and iron of Allegany County.⁴⁶

A series of serious breaches in the canal banks between Harpers Ferry and Shepherdstown in November hampered canal trade in the waning months of the year and led to widespread discussion in the Potomac Valley newspapers on the unreliability of the waterway as an effective transportation line. The Williamsport *Banner* reported in mid-November that during the interruption in navigation considerable quantities of flour and produce had been arriving at the basin there, which were destined for Baltimore and Washington as soon as the breach was repaired.⁴⁷ The following week the Georgetown *Advocate* informed its readers that when the canal had been rewatered between Dams Nos. 3 and 4 after the breach had been repaired it had given way again. Thus, the agricultural produce, which had accumulated at Williamsport, would not be able to reach the District cities before ice closed the canal for the winter.⁴⁸

Despite the loss of revenue from these breaches, the canal trade had its best year to date. The tolls collected amounted to \$47,865.94, a sum exceeding the previous year's high by nearly \$13,000.⁴⁹

1840

The year 1840 marked a downturn in the volume of canal trade. The navigation was again disrupted for a long period in mid-summer by breaches in the lime sink areas at Prather's Neck and at a point four miles below Hancock. Consequently, the amount of tolls collected decreased some \$4,000 to \$43,808.02.⁵⁰

1841

The year 1841 saw a slight increase in trade on the canal, although a portion of the increased revenues from tolls could be attributed to the new tariff which went into effect on May 1 raising the charges of the major agricultural products and provisions to a flat 2 cents a ton per mile. This rate increase, which had been prompted by similar increases by the Baltimore & Ohio Railroad, compensated for the relatively light grain harvests during the summer and the lingering sluggishness in the national economy. The total amount of tolls collected for the year amounted to \$57,012.29, or an increase of more than \$13,000 over the previous year.⁵¹

⁴⁵ Washington *National Intelligencer*, Vol. LVI (April 27, 1839), 131–132.

⁴⁶ *Eleventh Annual Report* (1839), C & O Co., 7.

⁴⁷ Williamsport *Banner* quoted in *Niles' Register*, Vol. LVII (November 16, 1839), 180.

⁴⁸ Georgetown *Advocate* quoted in *Niles' Register*, Vol. LVII (November 23, 1839), 201.

⁴⁹ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152

⁵⁰ *Twelfth Annual Report* (1840), C & O Co., 8, and *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152

⁵¹ *Seventeenth Annual Report* (1845), C & O Co., 19–20, and *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152

1842

Because of another light grain harvest in the valley and the continuing economic problems of the nation, canal trade declined slightly in 1842 as the amount of tolls collected dipped approximately \$1,000 to \$56,005.80. A secondary and yet significant cause of the slump in trade was the continuing effort of the Baltimore & Ohio to monopolize the flour trade.⁵² The listings for the ascending and descending trade on the canal, the first such yearly statistics available since those of 1832, reveal that the canal remained heavily dependent on the transportation of agricultural products for its revenues, although coal and lumber made up a greater proportion of the downstream trade than they had in 1832. The principal articles of the descending trade were as follows:

Flour	151,966 barrels
Wheat	214,569 bushels
Corn and Oats	59,199 bushels
Mill Offal	46,472 bushels
Coal	111,293 bushels
Lumber	916,184 feet, board measure

On the other hand, the only two articles listed for the ascending trade were:

Plaster	3,206 tons
Salted fish	5,294 barrels ⁵³

1843

The forecast of a good grain harvest throughout the Potomac Valley in 1843 led company officials to predict a banner year for canal trade with estimates of toll revenues ranging as high as \$80,000. However, the failure of the harvest to reach its expectations, the lowering of the tariff of tolls on most agricultural products in response to the Baltimore & Ohio's lower rates, and the suspension of navigation for more than six weeks following two heavy floods in April and September combined to reduce toll revenues nearly 20 percent from the previous year to \$44,540.51.⁵⁴

An analysis of the descending and ascending trade for the year shows little deviation from the previously established patterns. The principal articles in the descending trade were:

Flour	156,242 barrels
Wheat	142,785 bushels
Corn	167,326 bushels
Oats	38,930 bushels
Corn Meal	18,942 bushels
Mill Offal	49,642 bushels
Pork	50,324 pounds
Lumber	500,000 feet, board measure

⁵² *Fourteenth Annual Report* (1842), C & O Co., 4 and *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

⁵³ *Fifteenth Annual Report* (1843), C & O Co., 11.

⁵⁴ *Fourteenth Annual Report* (1842), 4; *Fifteenth Annual Report* (1843), 13–14; *Sixteenth Annual Report* (1844), C & O Co., 39–44; and *Proceedings of the Stockholders*, C, 230–232.

The only three articles listed for the ascending trade were:

Salted Fish	3,533 barrels
Salt	1,240 tons
Plaster	4,259 tons ⁵⁵

1844

Canal officials looked forward to a promising year for the canal trade in 1844. Large quantities of flour and other agricultural produce had accumulated in warehouses all along the line during the one-month suspension of navigation following the mid-September 1843 flood, and it was expected that considerable revenue would be made when these articles were shipped downstream the following spring. It was also felt that the trade of the canal would be enhanced by the spring of the Potomac Aqueduct and the Alexandria Canal to navigation in December 1843.⁵⁶

The volume of commerce on the canal did increase by nearly 20 percent for the year with the amount of tolls collected raising some \$8,000 to \$52,674.24. The descending trade again reflected the canal's heavy dependence on the agricultural production and the timber resources of the valley, the principal articles being:

Flour	172,796 barrels
Wheat	199,620 bushels
Corn	173,023 bushels
Oats	39,000 bushels
Bran, Mill Offal	76,683 bushels
Corn Meal	15,631 bushels
Lumber	1,000,000 feet, board measure

As in previous years, the only three articles listed as passing up the canal in quantity were:

Salted Fish	2,075 barrels
Salt	1,295 tons
Plaster	4,838 tons ⁵⁷

From the record it is apparent that one of the most significant factors in the increase of commerce on the canal during 1844 was the expansion of the descending flour trade. The total number of barrels for this product increased by more than 16,000 over that of 1843. Canal officials attributed this increase to the fact that the farmers and millers of the southwestern counties of Pennsylvania had found that the canal afforded them the cheapest and most convenient transportation line to the eastern markets and had consequently adopted it.⁵⁸

Arrivals and Departures of Boats from Georgetown January 1843 to May 1844:⁵⁹

⁵⁵ *Proceedings of the Stockholders*, C, 305, 385.

⁵⁶ *Proceedings of the Stockholders*, C, 232–233.

⁵⁷ *Seventeenth Annual Report* (1845), C & O Co., 32–33, and *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

⁵⁸ *Seventeenth Annual Report* (1845), 20–21.

⁵⁹ *Proceedings of the Stockholders*, C, 379.

Boat Arrivals and Departures	1843	1844
January	31	48
February	3	12
March	247	665
April	152	98
May	371	391
June	365	
July	146	
August	191	
September	91	
October	70	
November	459	
December	355	
	2,484	1,214
Total in first 5 months of 1843:		-804
		Increase: 410

1845

The year 1845 saw a slight decrease of trade on the canal, as the revenue collected from the toll charges declined some \$800 to \$51,810.70. It is interesting to note that this decline in traffic on the canal took place despite optimistic reports in the Williamsport *Banner* that trade was very heavy during the year. On November 1 the *Banner* reported that

the trade of that part of the Canal, which is completed, never before was so brisk. Immense quantities of flour, grain and other kinds of produce have been collected in our town, and are now ready for transportation to the District Cities. This, we understand too, is the case at other points along the line of the Canal. Within the last week or two, an unusually large number of boats has passed down the Canal.⁶⁰

Flour	170,464 barrels
Wheat	299,607 bushels
Corn	126,799 bushels
Oats	35,464 bushels
Mill Offal	38,575 bushels
Corn Meal	16,327 bushels
Pork	15,250 pounds
Lumber	508,083 feet, board measure
Stone	12,060 perches

The ascending trade, the records for which were the most complete to date, apparently improved somewhat over the totals for the previous year. The principal products transported up the canal were:

⁶⁰ *Niles' Register*, Vol. LXIX (November 8, 1845), 147.

Salted Fish	4,569 barrels
Salt	1,265 tons
Plaster	4,721 tons
Lumber	820,000 feet, board measure
Potatoes	2,511 bushels
Bricks	118,225 units
Wheat	1,708 bushels
Oysters	1,351 bushels ⁶¹

1846

Trade on the canal in 1845 showed a slight improvement over that of 1845 as the revenue from tolls rose some \$1,500 to \$53,357.24. For the first time since the opening of navigation, the company kept separate statistics relative to the tolls for the ascending and descending trade. The total of the former was \$6,078.81 while that of the latter was \$47,278.38.⁶²

Traffic on the canal was heavy during the first four months of the year, the \$10,058.64 collected in tolls for April being the highest total for any month in the history of the waterway. The upturn in canal business was primarily the result of a bumper harvest in the Potomac Valley the previous year and the continuing increase in trade from the southwestern counties of Pennsylvania.⁶³

The expansion of trade in the early months of the year was sustained until July when a major flood struck the valley, wrecking destruction on the summer grain crops and suspending navigation for a considerable period. Despite the problems posed by the flood, the canal flour trade increased by over 25 percent to 234,539 barrels, the largest quantity ever transported in one year on the waterway. However, the number of bushels of corn and corn meal carried down the canal were considerably reduced, the totals for the former being 126,799 in 1845 and 30,005 in 1846 while those of the latter were 16,327 and 8,437 respectively. Canal officials attributed much of this as a result of the greater demand for these products in Baltimore than in the District cities. The shipping industry in Baltimore had reached unprecedented heights within the past year, as evidenced by the fact that the Baltimore shippers had even imported corn from New York to fill their cargo needs for exportation to Europe.⁶⁴

All told the ascending trade comprised the equivalent of 10.986 tons while the amount of descending trade was 49,161 tons. The principal articles moving up the canal were:

Salted Fish	3,475 barrels
Plaster	3,839 tons
Lumber	1,061,855 feet, board measure
Coal	1,003 tons
Potatoes	1,526 bushels

⁶¹ *Seventeenth Annual Report* (1845), C & O Co., 38-39, and *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152. The reason that more complete records for canal trade are available for the period from 1845 on is that on August 13, 1845, the board ordered the company clerk to keep "a book in which he shall make a regular monthly entry of the articles transported on the Canal -- designating where they are loaded, where unloaded and the quantity of each kind, under their respective heads, -- the said entries to be made from the 1st of January 1845." *Proceedings of the President and Board of Directors*, G, 293.

⁶² *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

⁶³ *Eighteenth Annual Report* (1846), 22.

⁶⁴ *Nineteenth Annual Report* (1847), C & O Co., 7-8.

Bricks	440,996 units
Bacon	5,700 pounds
Lard and Butter	64,960 pounds

The principal articles in the descending trade were:

Flour	234,539 barrels
Wheat	264,115 bushels
Corn	30,005 bushels
Oats	30,047 bushels
Mill Offal	63,486 bushels
Bacon and Pork	27,047 pounds
Lumber	2,851,541 feet, board measure
Bricks	17,500 units
Shingles, Staves, Laths, etc.	297,025 units ⁶⁵

1847

The early months of 1847 appeared to auger a banner year for canal trade. The amount of tolls collected through May 31 was \$30,331.85 or \$7,295.80 more than the corresponding period for the previous year. The corn trade, which had declined in 1846, was again active, as 16,351 bushels, or five times the quantity shipped for that entire year, had already passed down the canal by June 1. Accordingly, company officials informed the stockholders that unless there was a poor grain harvest in northwestern Virginia, western Maryland and southwestern Pennsylvania, there was "just cause to expect that our revenues this year will much exceed the receipts of any former year."⁶⁶

The expectations of the company officials were again thwarted by the highest flood in the history of the Potomac Valley in early October. The consequent damage to the canal and the surrounding countryside severely affected the overall statistics for the canal trade. The ascending trade increased by nearly 2,000 tons to 12,809, and the descending trade increased by some 9,000 tons to 58,631. However, there was not a corresponding increase in the revenue from tolls as the average distance of transportation was less in 1847 than in 1846 and a large portion of the tonnage increase comprised articles on which small rates of toll were charged. In actual fact, the ascending tolls amounted to \$6,774.80 while the descending tolls were \$45,665.55. The combined total of the revenues collected from tolls was \$52,440.35, a decrease of some \$900 from 1846.⁶⁷

The principal articles in the ascending trade were:

Salted Fish	3,723 barrels
Plaster	3,829 tons
Lumber	770,300 feet, board measure
Coal	1,687 tons
Potatoes	1,112 bushels

⁶⁵ *Eighteenth Annual Report* (1846)

⁶⁶ *Nineteenth Annual Report* (1847), 10, 48.

⁶⁷ *Proceedings of the Stockholders*, D, 122–123, and *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

Bricks	178,000 units
Mill Offal	3,362 bushels
Iron Ore	3,009 tons
Bacon	9,300 pounds

The bulk of the descending trade consisted of the following articles:

Flour	176,789 barrels
Wheat	235,212 bushels
Corn	238,216 bushels
Oats	32,035 bushels
Corn Meal	17,958 bushels
Mill Offal	87,644 bushels
Bacon and Pork	26,965 pounds
Lumber	1,583,600 feet, board measure
Nails	11,892 kegs
Bricks	45,500 units
Shingles, Staves, Laths, Hoop Poles	955,525 units ⁶⁸

1848

The year 1848 saw an increase of trade over the totals of 1847 of 14,996 tons and \$1,705.86 in revenues from tolls. The ascending tonnage increased to 16,439 while that of the descending trade rose to 69,997. The ascending tolls increased to \$8,405.40 while those of the descending trade rose to \$45,740.81, providing a total revenue of \$54,146.21. A significant portion of the increased tonnage of the descending trade was the increase in the amount of flour transported totaling 40,332 barrels over the quantity shipped in 1847. The increase in the revenue did not attain a corresponding ratio with the enlarged tonnage as the average distance of transportation was less than in 1848 and the greater portion of the increase of tonnage consisted of articles on which small rates of toll were charged.⁶⁹

The principal products of the ascending trade were:

Salted Fish	3,477 barrels
Salt	2,133 tons
Plaster	7,310 tons
Lumber	1,391,000 feet, board measure
Iron Ore	2,575 tons
Oysters	4,700 bushels
Bricks	22,000 units

The primary articles of the descending trade were:

Flour	217,112 barrels
Wheat	220,025 bushels

⁶⁸ *Proceedings of the Stockholders*, D, 122–123.

⁶⁹ *Twenty-First Annual Report* (1849), C & O Co., 14.

Corn	144,103 bushels
Oats	12,959 bushels
Mill Offal	77,553 bushels
Limestone	10,030 perches
Lumber	2,080,600 feet, board measure
Bricks	10,000 units
Shingles, Staves, Laths, Hoop Poles	993,100 units ⁷⁰

1849

The year 1849 witnessed a significant rise in canal trade both in tonnage carried and toll revenues collected. The ascending tonnage increased from 16,439 in 1848 to 20,778, while that of the descending tonnage rose from 69,997 to 81,263. The combined totals of the ascending and descending trade amounted to 102,041 tons, an increase of 15,601 tons over the tonnage of 1848. The tolls collected from the ascending trade were \$9,188.84 while those from the descending trade were \$52,634.33, thus providing the company with \$61,823.17 in toll revenues. This sum, which was some \$7,600 over the 1848 total, was the largest amount ever collected in a single year to date by the company.⁷¹

The principal products of the ascending trade were:

Salted Fish	3,995 barrels
Salt	2,019 tons
Plaster	6,599 tons
Coal	1,236 tons
Coke	2,854 tons
Lumber	1,617,000 feet, board measure
Iron Ore	4,025 tons
Bricks	42,000 units

The major articles in the descending trade of the canal were:

Flour	236,620 bushels
Wheat	240,073 bushels
Corn	244,281 bushels
Oats	13,200 bushels
Mill Offal	45,423 bushels
Apples	12,970 bushels
Stone (rough)	17,750 perches
Lumber	1,560,956 feet, board measure
Bricks	39,000 units
Shingles, Staves, Laths, Hoop Poles	783,800 units ⁷²

⁷⁰ *Twenty-First Annual Report* (1849), 32–33.

⁷¹ *Twenty-Second Annual Report* (1850), C & O Co., 10–11, 23.

⁷² *Ibid.* 23–24.

1850

Trade on the canal in 1850 showed little change from the previous year despite the continuance of agricultural prosperity in the valley and the formal opening of navigation to Cumberland on October 10. The repairs to the waterway below Dam No. 6 had restored the capacity of the canal to its original intended dimensions, thereby allowing the boats to carry heavier cargoes. During the spring, a single boat had descended the canal from Dam No. 4 to Georgetown with 1,110 barrels of flour (equivalent to 105 tons of 2,240 pounds), making it the largest cargo to pass down the canal since the heavy floods of the mid-1840s had battered the waterway.⁷³

The trade statistics for the year show mixed results when compared with those of 1849. The ascending tonnage increased by nearly 2,500 tons to 23,261, while the descending tonnage was reduced by nearly the same amount to 78,689. Thus, the aggregate trade on the waterway was 91 tons less than 1849.

While the tonnage was somewhat lower than the previous year, the amount of tolls collected increased some \$2,600 to \$64,442.03. The amount of toll revenue for the ascending trade rose some \$400 over the 1849 totals to \$9,628.21 while that of the descending trade increased by nearly \$2,200 to \$54,813.81. The increase in the descending trade tolls was primarily the result of the shipment of 7,171 tons of coal down the canal from Cumberland after October 10. Consequently, the company officials informed the stockholders in February 1851 of the bright future prospects of the coal trade on the revenues of the company:

As the Canal is now opened to the coal region the future annual statements of the Company will present much larger results.

The prospect of a large and augmenting coal trade by the Canal is of the most flattering character. An immense amount of capital has been invested in the coal mines, principally by parties residing in New York and Boston, who will consequently have a strong and direct interest in introducing the Cumberland coal into the markets of these two great and thriving cities where such vast quantities may be consumed, and railroads connecting the mines with the Basins of the Canal at Cumberland have already been constructed at a considerable cost, which are capable of bringing down about a million of tons per annum. The capacity of these connections may be increased to any desirable extent. The only present subject of regret is the want of a due supply of Cars for the connecting railroads, and of Boats for the canal. These deficiencies, from present indications, will soon be remedied. A number of Boats were constructed during the past winter, and all the Boat yards are now busily engaged in increasing the supply. But the preparations for the commencement of the trade, limited as they appeared, were more advanced upon this canal than upon other similar improvements, at the time of their completion. More coal started down the Chesapeake & Ohio Canal on the first day of the opening, than was transported on the Lehigh navigation, upon which the Anthracite coal trade of Pennsylvania was *commenced* on the year 1820 during the first year of its operations. In that year only 365 tons were carried down from the Lehigh mines to Philadelphia, and we are informed in a history of the Lehigh Coal and Navigation Company published by the order of the Board of Managers of the Company in 1840, that "this quantity completely stocked the market and was with difficulty disposed of during the year." The quantity of coal which started down the Chesapeake & Ohio Canal from Cumberland on the 10th of October last, the day of the opening of the navigation, was 491 tons. The whole quantity that passed down from the 10th of October to the 21st of December 1850 was 7,171 tons. The

⁷³ *Ibid.* 9-10.

whole quantity transported on the Schuylkill navigation in 1825, the first year of its operation, was only 6,500 tons, and this was the whole quantity sent down from the Schuylkill coal region during that year. In the year 1849 there were sent to market from that region 3,203,462 tons of coal, and it was scarcely sufficient to supply the demand. When the Lehigh navigation was opened the use of coal was comparatively unknown in the United States. Now it is one of the common necessities of life in the cities of the Atlantic, and its consumption for Steam vessels, Railroad Locomotives and manufacturing purposes, is large and constantly increasing. The Cumberland coal, therefore, whatever quantities of it may be thrown into the markets, will not have to labor under the disadvantages which attended the first introduction of the Anthracite, and its superiority to the latter will, we believe, at once give it the command of the markets. If sold at reasonable rates, the consumption will only be limited by the extent of the supply.

The principal products in the ascending trade were as follows:

Fish, Salted and Fresh	758 tons
Groceries	643 tons
Salt	1,607 tons
Lumber, Laths, Palings, Shingles, Hoop-Poles	1,249 tons
Ore	7,455 tons
Coal	1,783 tons
Coke	2,205 tons
Plaster	5,334 tons

The principal articles in the descending trade were as follows:

Flour	27,120 tons
Wheat	5,318 tons
Corn	1,726 tons
Lumber, Laths, Palings, Shingles, Stoves, Hoop-Poles	2,765 tons
Iron, Pig and Scrap	1,196 tons
Coal	7,956 tons
Wood	4,275 tons
Stone, rough (perches)	13,303 tons
Limestone	10,234 tons ⁷⁴

C. ENCOURAGEMENT OF TRADE ON THE CANAL: 1830–1850

On the whole, the problem of developing business for the canal was not clearly or fully recognized during the period until 1850. The directors tended to look upon their work as a magnificent enterprise to which trade would naturally be attracted. They conceived their task to be mainly the construction and maintenance of the waterway. Thus the efforts of the board to increase canal trade were haphazard.

⁷⁴ *Report to the Stockholders on the Completion of the Canal*, Appendix A, 6–7; C, pp.141–143; & K, 153. In 1850 the company began a new system of calculating its ascending and descending trade in terms of tons rather than the various kinds of units that had been used from 1830 to 1849.

In March 1833 the board refused the request of the Alexandria Canal Company to transport stone for the construction of the Potomac Aqueduct toll-free on the canal even though it was widely recognized that the completion of the structure would provide a valuable outlet market for the waterway.⁷⁵ As was seen in the preceding chapter, the board sought to encourage the development of passenger travel, packet service, boat-building and steamboat passage, but they did nothing to establish and operate a freight line for the company. Throughout the period, the company spent large sums on dredges, ice-breakers and repair gangs to keep the canal open for navigation, but forbade its employees to have any connections with individuals or businesses operating boats on the canal.⁷⁶ Despite the heavy dependence of the canal on the descending flour trade, the directors generally placed their hopes for the continuing expansion of this business in “the proper encouragement on the part of purchasers or commission merchants” in Georgetown.⁷⁷ They manipulated the toll tariffs of 1841 and 1843 so as to compete with the Baltimore & Ohio Railroad for business, but made little effort to control all the charges of transportation, such as freights and wharfage.⁷⁸ Recognizing the intimate relationship between canal trade and local agricultural prosperity, the board on October 10, 1848, reduced charges on bones and bone dust for fertilizers, in cooperation with the Virginia Society for the Advancement of Agriculture, in order to help increase the productivity of the soil and thus indirectly stimulate trade.⁷⁹ Later, on March 1, 1849, the toll rates were reduced to ¼ cent a ton per mile on guano, ashes, plaster of paris, pondrel, resats, lime, chemical salts and oyster shells for the same purpose, but at the same time the directors refused to have any connection with the business of transporting these products.⁸⁰

Throughout the 1830s and 1840s while the canal board was pursuing this uneven approach to the stimulation of trade, it frequently cited the value to the State of New York of the Erie Canal in terms of the trade it produced for the state as much as the profits earned by the canal itself. Subsequently after 1850 the Chesapeake & Ohio Canal Company reversed itself on most of these points and took a more active approach to the stimulation of trade.

D. COMPETITION WITH THE B & O RAILROAD, 1830–1850

Two factors tended to discourage the growth of trade between 1830 and 1850. One was the interruptions to navigation due to breaches and floods, both of which subjects [are] covered elsewhere in this Historic Resource Study. The other was the competition of the Baltimore & Ohio Railroad for the flour and coal trade, the two main present and prospective sources of canal revenue.

The struggle for the lucrative Shenandoah flour trade at Harpers Ferry involved considerable maneuvering between the canal and the railroad.⁸¹ Until May 1, 1841, the charges by rail from Harpers Ferry to Baltimore, a distance of 82 miles, were 34 cents a barrel plus 3 cents for

⁷⁵ *Proceedings of the President and Board of Directors*, C, 299. Aside from the short-sightedness of the directors, this decision also reflected the opposition of the Georgetown merchants who feared the loss of trade to Alexandria with the completion of the Potomac Aqueduct.

⁷⁶ *Ibid.*, B, 410–419; D, 240–252, 440.

⁷⁷ *Nineteenth Annual Report* (1847), 7–8.

⁷⁸ *Proceedings of the President and Board of Directors*, F, 295–296; H, 163; and *Fifteenth Annual Report* (1843), 13–14.

⁷⁹ *Proceedings of the President and Board of Directors*, M, 214.

⁸⁰ *Ibid.*, H, 238–239.

⁸¹ It is interesting to note that the canal directors had scoffed at the threat of the railroad to its flour trade in the early 1830s. In June 1832, the stockholders had been told: The spectacle which has recently been presented, of a single horse of moderate size and strength, drawing 512 barrels of flour, in a heavy boat with apparent ease, a distance of 22 miles, through twenty-three locks, in a single day, is calculated, of itself, to countervail the numerous theories of utility of railroads, by which the public mind has been perplexed. *Fourth Annual Report* (1832), 18.

receiving and delivery fees. On May 10 the railroad raised the rate to 50 cents a barrel, including handling. It then petitioned the state legislature to compel the canal company to raise its toll to a “profitable rate,” and the canal obliged by raising its charges without awaiting the action of the General Assembly. Within a month, on June 3, the railroad reduced its rates to 34 cents a barrel, including handling. As the charges from Frederick to Baltimore at the time were said to be 30 cents, the additional charge for the 21 miles from Frederick to Harpers Ferry was only 4 cents. Between June and December 1841, the flour trade on the canal from Harpers Ferry fell off 4,411 barrels as compared to the 1840 figures:

	1840	1841
June	6,362	2,695
July	2,649	702
August	1,889	747
September	777	1,821
October	1,331	2,239
November	1,298	1,661
December	933	963
	15,239	10,828

A large amount of this decrease was attributed to the actions of the railroad company.⁸²

In October 1844 the railroad again reduced its rates on the transportation of flour by 25 percent. Within the month, the citizens of Alexandria complained of the loss of the Harpers Ferry flour trade to the Baltimore millers. They sent two of their representatives, Robert H. Miller and Thomas M. McCubbin, to urge the canal board to consider some remedial action.⁸³ At the same time, the railroad accused the canal company of charging so little for the toll on flour that it could not make a profit and therefore of cheating the railroad and the City of Baltimore.⁸⁴

The canal company sought to settle the unrest of the merchants in the District cities and to answer the charges of the railroad by devoting a large portion of their annual reports of 1845, 1846 and 1847 to the problem. The tolls that the canal had charged on flour throughout this period were as follows:

1835–1842: 2 cents a barrel per mile for the first 15 miles and 1 ½ cents thereafter.

1842–1843: 2 cents a barrel per mile flat rate.

1843–1847: 2 cents a barrel per mile for the first 20 miles and 1 ½ cents thereafter.

These tolls were much higher than that charged for the transportation of flour on the New York canals and the Susquehanna and Tidewater canal. Despite the high rates, however, the volume of the flour trade on the canal had increased each year irregardless [of] the attempts of the railroad to lure away the flour trade at Harpers Ferry. The number of barrels transported on the canal from 1842 to 1846 had grown as follows:

⁸² Elgin to Ingle, Dec. 23, 1841, Ltrs. Recd., C & O Co. In July 1841 the railroad also attempted to lure the plaster trade away from the canal by reducing its charges from \$2.40 to \$2.00 per ton from Baltimore to Harpers Ferry. Later the railroad permitted all plaster that was to be transferred to the Winchester and Potomac Railroad to pass over its line free of any toll.

⁸³ *Resolutions Adopted by Citizens of Alexandria, October 14, 1844*, Ltrs. Recd., C & O Co.

⁸⁴ *Eighteenth Annual Report* (1846), 14–19.

1842	151,966 barrels
1843	156,242 barrels
1844	172,464 barrels
1845	170,464 barrels
1846	234,539 barrels

The canal board attributed much of this increase to the fact that the farmers of the southwestern Pennsylvania counties had begun to use the waterway as the cheapest outlet for their products to the eastern markets. The directors used these statistics to back up their argument that the railroad was totally unable to compete with the canal upon equal terms in the transportation of heavy freight. As a consequence, they saw little reason for reducing the charges on the item from which they gained the largest portion of their revenue.⁸⁵

The struggle for the Cumberland coal trade, which began in the 1840s ultimately proved to be the decisive factor in the course of canal trade and prosperity. From December 1843 until March 1845, the railroad and the canal cooperated in the handling of the lucrative business. According to their agreement the railroad which had reached Cumberland in 1842, undertook to carry all the coal offered for shipment via the waterway over its own tracks to the western terminus of the canal at Dam No. 6. The coal was to be carried by the Baltimore & Ohio at the special rate of 2 cents a ton per mile providing the trade did not interfere with the general business of the railroad and did not require a considerable increase in the amount of rail equipment on the line.⁸⁶

Canal officials looked forward to the operation of this arrangement in the spring of 1844. Anxious to gain increased revenues from the coal trade, the board established a toll on its transportation of 7/10 cent a ton per mile, the same rate as charged on the Schuylkill Navigation Canal in Pennsylvania. However, by June 1 only 549 tons of coal had been transported on the canal below Dam No. 6. The tardiness of the coal operators to take advantage of the new agreement was attributed "to the expectation of the usual spring freshets, by which means they have heretofore been in the habit of bringing down their coal from Cumberland to Dam No. 6 by the natural channel of the river." During the late spring and early summer, the coal companies began to transport larger quantities of coal from the Georges Creek mines to Cumberland and soon the railroad was delivering the product to the canal at Dam No. 6. In mid-June it was reported that five boats were active in the canal coal trade and that the canal company revenues derived from the commerce amounted to \$250 per week. The future prospects of the coal trade looked even more promising when it was announced that the firm of Atkinson and Templemen had contracted with the federal government for the delivery of 40,000 tons of coal to the District of Columbia.⁸⁷ By the end of the year, some 40,000 tons of coal had been delivered to the canal basin at Cumberland by the railroad.⁸⁸

The passage of the canal bill by the Maryland General Assembly in March 1845 whereby the company was permitted to issue \$1,700,000 of preferred construction bonds on the mortgage of its revenues in order to finance the construction of the remaining 50 miles of the waterway to Cumberland brought an abrupt end to this arrangement.⁸⁹ The railroad and its ally, the City of

⁸⁵ *Seventeenth Annual Report* (1845), 21–21; *Eighteenth Annual Report* (1846), 14–19; and *Nineteenth Annual Report* (1847), 7–8.

⁸⁶ *Proceedings of the President and Board of Directors*, G, 97–100, 15; *Proceedings of the Stockholders*, C, 192–302; McLane to Coale, Sept. 17, 1843, Ltrs, Recd., C & O Co.; *Seventeenth Annual Report* (1845), 5–7, 24–26; and *Special Report of the President and Directors of the Chesapeake & Ohio Canal Company, to the Stockholders, on the Subject of Completing the Canal to Cumberland*, Nov. 16, 1843 (Washington, 1843), 1–59.

⁸⁷ *Proceedings of the Stockholders*, C, 306–307, 315–316; and *Niles' Register*, Vol. LXVI (June 22, 1844), 272.

⁸⁸ *Seventeenth Annual Report* (1845), 6.

⁸⁹ *Niles' Register*, Vol. LXVIII (March 8, 1845), 16 and *Ibid.*, Vol. LXVIII (March 15, 1845), 23–24.

Baltimore, began a large-scale assault on the trade of its competitor, which threatened to deprive the latter of all possible chance of success, even before it was completed.

The City of Baltimore aided the efforts of the railroad by passing a city ordinance in April 1845 awarding the railroad to run its trains into the city with coal, iron ore, &c. The ordinance also permitted the railroad to lay tracks to a new depot on the south side of Baltimore Harbor where vessels could dock free of charges, which had been in effect up to this time. The city council also urged the railroad to lower the price of bringing the coal and iron ore from western Maryland to Baltimore “to a mere nominal sum” to defy the competition of the canal.⁹⁰

The railroad abruptly terminated its agreement for the transportation of coal from Cumberland to Dam No. 6. The rates were raised to 4 cents a ton per mile for coal and 6 cents for iron. The excuse given by railroad President Louis McLane for the action was, curiously enough, that the amount of business was “so inconsiderable as scarcely to authorize a longer continuance of our preparation for its accommodation at present rates.” Besides the railroad was making plans for a more extensive trade to Baltimore, which was more important to his company.⁹¹ The canal company refused to recognize the abrogation as an act in good faith, but, other than sending a resolution to that effect to the railroad, made no sustained protest.⁹² President Coale observed in the reply to McLane that whether:

The reasons given in your letter are sufficient to authorize a departure from the arrangement entered into between the two Companies in Sept. 1843, & whether the interests of “the public generally” will be subserved by the imposition of a prohibitory tariff between Cumberland and Dam No. 6, are questions upon which I think impartial men will differ with you.⁹³

The action of the railroad totally stopped the transportation of coal from Cumberland to Dam No. 6. In June 1845 the canal stockholders were informed that the coal trade had not materialized as expected due to the discriminatory rate charges of the railroad.⁹⁴

The following year the directors reported that no coal had been transshipped to the canal at Dam No. 6 by the railroad during the preceding year.⁹⁵

After several years, the canal board determined to take steps to compete with the railroad for the Cumberland coal trade. On March 1, 1849 the toll on coal was reduced from 7/10 cent a ton per mile to ½ cent a ton per mile for the first twenty miles and to 4/10 cent a ton per mile thereafter. However, the board could do little else until the waterway was completed to Cumberland.⁹⁶

⁹⁰ *Niles' Register*, Vol. LXVIII (April 12, 1845), 85.

⁹¹ McLane to Coale, May 7, 1845, Ltrs. Recd., C & O Co.

⁹² *Proceedings of the President and Board of Directors*, G, 252–253.

⁹³ Coale to McLane, May 9, 1845, Ltrs. Sent, C & O Co.

⁹⁴ *Seventeenth Annual Report* (1845), 21–22.

⁹⁵ *Eighteenth Annual Report* (1846), 12.

⁹⁶ *Proceedings of the President and Board of Directors*, H, 239.

II. COMMERCE ON THE CHESAPEAKE & OHIO CANAL: 1851–1889

A. TARIFFS OF TOLL, 1851–1889

Upon the completion of the canal to Cumberland, the board took under consideration revision of the existing toll rates. As coal soon became the principal article of trade, the charges on that product became the chief source of canal revenue. The directors offered to fix the toll on coal and coke at 2 mills a ton per mile, if the owners of the Maryland Mining Company, the Washington Coal Company, the Allegany Company and the Frostburg Coal Company would guarantee to ship 300,000 tons in 1851 and 600,000 tons in 1852 via the canal.⁹⁷ When the coal companies indicated that they were unable to make the necessary guarantees, the board made another offer to reduce the toll on coal and coke to the same level provided the coal companies would promise to ship 500,000 tons between July 1, 1851 and July 1, 1852.⁹⁸ Again the companies were unable to take advantage of the offer, and the toll remained at $\frac{1}{4}$ cent a ton per mile.⁹⁹ Other preliminary modifications of the existing charges, adopted on February 28, 1851, affected a variety of agricultural and non-farm products:

- Hogs Slaughtered, Bacon & Other Meats—2 cents a ton per mile.
- Whisky and Other Domestic Spirits; Fish, fresh and salted—2 cents a ton per mile for the first 20 miles and 1 cent a ton per mile thereafter.
- Salt—1 cent a ton per mile for the first 20 miles and $\frac{3}{4}$ cent a ton per mile thereafter.
- Fire Brick—1 cent a ton per mile for the first 20 miles and $\frac{1}{2}$ cent a ton per mile thereafter.
- Bricks and Ice—1 cent a ton per mile for the first 20 miles and $\frac{1}{4}$ cent a ton per mile thereafter.
- Sand, Gravel, Clay, Earth and Paving Stones— $\frac{1}{4}$ cent a ton per mile.¹⁰⁰

These early rate changes continued the downward trend of tolls on the 1840s and anticipated the general reductions, which were incorporated in the revised list. The new permanent schedule went into effect on July 1, 1851. It divided all articles transported on the canal into six classes. Reductions below the series established in 1835 ranged from 25 to 75 percent, the greatest decrease being that in the toll on coal. The classes and their charges were as follows:

Class I (at a rate of 2 cents a ton per mile for the first 20 miles, and 1 cent a ton per mile thereafter).

1. Ale, beer, cider per ton of 8 barrels or 2 hogsheads.
2. Beef, pork (salted and pickled) per ton of 8 barrels.
3. Dried apples, peaches per ton of 45 bushels.
4. Fresh apples, peaches per ton of 40 bushels or 14 barrels.
5. Barley, buckwheat, corn, flax, grain, seeds, rye, wheat per ton of 40 bushels.
6. Corn on the ear per ton of 80 bushels.

⁹⁷ *Proceedings of the President and Board of Directors*, H, 387–388.

⁹⁸ *Ibid.*, H, 404.

⁹⁹ *Proceedings of the Stockholders*, D, 412 – 413.

¹⁰⁰ *Proceedings of the President and Board of Directors*, H, 423–424.

7. Corn meal per ton of 45 bushels or 10 barrels.
8. Dry goods, groceries, glass, and crockery ware per ton of 8 barrels or 2 hogsheads in bundles, bales, crates or boxes of 40 cubic feet.
9. Flour per ton of 10 barrels.
10. Fish (salted and fresh) per ton of 3 barrels salted, 600 shad or 4,000 herring.
11. Furniture, empty carts per ton of 100 cubic feet or space occupied.
12. Grindstones, millstones, marble, cut and wrought stone per ton of 15 cubic feet.
13. Hemp, flax per ton of 2,240 pounds.
14. Slaughtered hogs, bacon, and other meats per ton of 2,240 pounds.
15. Iron hammered and rolled steel, lead, other metals per ton of 2,240 pounds.
16. Livestock per ton of 30 sheep, 15 hogs, or 3 cattle.
17. Nails per ton of 20 kegs.
18. Pleasure carriages, horses per ton of 2 2-wheeled, 1 4-wheeled, 2 horses, or 2 buggies and 1 horse cart.
19. Tobacco unmanufactured per ton of 2 hogsheads.
20. Wine, foreign spirits per ton of 220 gallons.
21. Window glass per ton of 2,800 feet.
22. Whisky, domestic spirits per ton of 8 barrels or 2 hogsheads.
23. Sundries per ton ascertained by measurement.

Class II. (at a rate of 1 cent per ton per mile).

24. Bran, shorts, mill offal per ton of 100 bushels
25. Carts, wagons, ploughs per ton of 2 carts, 1 wagon, or 10 ploughs.
26. Boards, plank in boats per ton of 1,000 feet, board measure.
27. Shingles, laths per ton of 3,000 shingles or 5,000 laths.
28. Staves, heading per ton of 1,000 barrels or 500 Hogsheads.
29. Hoop-poles per ton of 1,000 barrels or 750 hogsheads.
30. Charcoal per ton of 56 bushels.
31. Hay, straw per ton of 2,240 pounds.
32. Potatoes, turnips per ton of 40 bushels.
33. Oats per ton of 70 bushels.
34. Oysters per ton of 28 bushels or 4,000.
35. Slate for roofing, tiles per ton of 800 slated and 500 tiles.

Class III (at a rate of 1 cent a ton per mile for the first 20 miles and $\frac{3}{4}$ cent a ton per mile thereafter).

36. Salt per ton of 45 bushels fine, 32 bushels coarse or 10 sacks.

Class IV (at a rate of 1 cent a ton per mile for the first 20 miles and $\frac{1}{2}$ cent a ton per mile thereafter).

37. Fire bricks per ton of 500 bricks.
38. Iron castings, bloom, railroad iron per ton of 2,240 pounds
39. Lime, cement per ton of 28 bushels or 7 barrels.
40. Rough stone other than prepared limestone per ton of 25 cubic feet.
41. Rails, fence posts in boats per ton of 180 rails or posts.
42. Timber round or square per ton of 70 cubic feet.

Class V. (at a rate of 1 cent a ton per mile for the first 20 miles and $\frac{1}{4}$ cent a ton per mile thereafter).

43. Bricks per ton of 500 bricks.
44. Ice per ton of 2,240 pounds.
45. Iron (pig and scrap) per ton of 2,240 pounds.
46. Bark in boats per cord of 128 cubic feet or ground bark per ton of 2,240 pounds.
47. Firewood in boats per chord of 128 cubic feet.

Class VI. (at a rate of $\frac{1}{4}$ cent a ton per mile).

48. Mineral coal per ton of 2,240 pounds or 28 bushels.
49. Coke per ton of 2,240 pounds.
50. Ore, iron, metals per ton of 2,240 pounds.
51. Ashes, bone dust, guano, plaster of paris, powdered lime for manure, oyster shells, manures per ton of 2,240 pounds.
52. Sand, gravel, clay, earth, paving stones per ton of 2,240 pounds.
53. Limestone per perch of 25 cubic feet.

Packet boats, pleasure boats, or boats used chiefly for the transportation of persons including all passengers and their customary baggage (all other articles to be charged at established rates)—8 cents per mile for the first 20 miles and 4 cents per mile thereafter.

Freight boats, gondolas, scows, and other craft—4 cents per mile for the first 20 miles and 2 cents per mile thereafter.

Timber, fence rails, posts, boards, plank, shingles, laths, staves, heading, hoop-poles, and firewood when transported in rafts pay double the tolls as when carried in boats.

Toll charged for 1 mile when distance less than 1 mile; over 1 mile, fraction rounded off to nearest whole mile.¹⁰¹

There appeared to be general satisfaction with the new toll rates. At their annual meeting in June 1852 the stockholders were informed that the tariff

has had a beneficial effect, not only in maintaining the trade already established upon the canal; but in opening new sources from which produce is drawn; in conciliating the good feelings of the transporters; and in increasing the revenues of the Company, by the augmented transportation upon the canal.¹⁰²

There were some modifications of these schedules in the course of the first decade. In an effort to encourage boat-building and indirectly to stimulate the lagging coal trade, the company again offered in 1852 to reduce the toll on coal and coke to 2 mills a ton per mile as soon as 100 new

¹⁰¹ *Ibid*, H, 449–453.

¹⁰² *Twenty-Fourth Annual Report* (1852), C & O Co. 7.

first-class boats were registered.¹⁰³ This condition was not fulfilled, however and the charges remained the same.

On January 8, 1857, a Committee on Revision of Toll made some recommendations to the board concerning some slight changes within and between toll classifications. Accordingly, the directors adopted new rates, which were to take effect on July 1. The changes (which follow) shifted salt from Class III to Class IV rates, corn and fish from Class I to Class II, and wood products from Class II to Class V:

Corn on the ear - 1¢ a ton per mile

Fish, salted and fresh (per ton of 8 barrels salted, 800 shad or 5,000 herring) - 1¢ a ton per mile

Salt (per ton of 45 bushels fine, 32 bushels coarse, or 10 sacks) - 1¢ a ton per mile for the first 20 miles and ½¢ a ton per mile thereafter

Boards, planks, shingles, laths, staves, headings, hoop-poles, - (in boats) 1¢ a ton per mile for the first 20 miles and ¼¢ a ton per mile thereafter

Limestone (per perch of 25 cubic feet) - ¼¢ a perch per mile up to 64 miles and 16¢ a perch for all distances thereafter

Lime and Cement (per ton of 28 bushels or 7 barrels) - 1¢ a ton per mile for the first 20 miles and ½¢ a ton per mile thereafter for distances up to 80 miles; 50¢ per ton for all distances thereafter.¹⁰⁴

There were two changes in the toll rates between 1857 and the outbreak of the Civil War. In June 1858 the board lowered the rates on railroad iron from Class IV to Class V.¹⁰⁵ in an effort to stimulate trade on the eve of the Civil War, the board on September 1, 1860, reduced rates on all commodities in Class I to the level of those in Class II.¹⁰⁶

After 1860 there were no comprehensive changes made in the tariff of tolls. With several exceptions, all the revisions were those in the toll on coal, the product which produced up to 95 percent of the canal's annual revenues. The toll changes on products other than coal were:

1. Leather and hides—On August 10, 1869 the toll on these articles was reduced to \$1.15 per ton for the entire 184 miles. The rate was proportioned for shorter distances.¹⁰⁷
2. Ice—On March 24, 1870 the board reduced the toll on ice to 30 cents per ton for the entire 185 miles. Shorter distances were to be charged proportionately.¹⁰⁸
3. Stone—On June 3, 1870 the rate on all stone transported on the canal was set at ¼ cent a ton per mile.¹⁰⁹
4. Grain and Flour—On May 17, 1876 the toll on these products was reduced to ¾ cent a ton per mile from points between Williamsport and Weverton to Washington. This action was taken to aid canal shippers in their competition with the Baltimore & Ohio Railroad for the agricultural trade of the Potomac Valley.¹¹⁰

¹⁰³ *Proceedings of the President and Board of Directors*, H, 570.

¹⁰⁴ *Ibid*, I, 333.

¹⁰⁵ *Ibid*, K, p.35.

¹⁰⁶ *Ibid*, K, 209, and Ringgold to Soper, August 25, 1860, Ltrs. Sent, C & O Co.

¹⁰⁷ *Proceedings of the President and Board of Directors*, L, 185.

¹⁰⁸ *Ibid*, L, 294.

¹⁰⁹ *Ibid*, L, 321.

¹¹⁰ *Ibid*, M, 255, 258.

Between 1863 and 1889 there were some nineteen revisions in the toll on coal. The rate of $\frac{1}{4}$ cent a ton per mile established in 1851 was equal to about 46 cents for the 185 miles from Cumberland to Georgetown. The following list details the changes made in this rate:

1. April 10, 1863: The board raised the toll on coal to $\frac{5}{16}$ cent a ton per mile until November 1. The additional revenue from this temporary rate hike was to compensate for the interruption of trade and the damage to the canal caused by the Civil War.¹¹¹
2. April 15, 1864: The toll on coal was increased to $\frac{3}{8}$ cent a ton per mile after May 1.¹¹²
3. July 28, 1864: On the recommendation of the Board of Public Works of the State of Maryland, the board increased the toll on coal to $\frac{1}{2}$ cent a ton per mile after August 1.¹¹³
4. September 5, 1866: The toll on coal was reduced to 4 mills a ton per mile after September 15.¹¹⁴
5. February 15, 1867: The toll on coal and coke was further reduced to $3\frac{4}{5}$ mills a ton per mile after March 1.¹¹⁵
6. March 26, 1868: At the urging of an Allegany County citizens committee, the board reduced the rate on coal to $\frac{1}{4}$ cent a ton per mile after April 1. The directors were forced to make this reduction because of the depressed coal trade, the high rates charged for wharfage at Cumberland and Georgetown, and the declining market value of coal in the District cities. Although the Board of Public Works failed to ratify this action, the canal company began to charge the lower rate in an effort to prevent the loss of its coal trade to the Baltimore & Ohio Railroad.¹¹⁶
7. February 13, 1873: The toll on coal was raised 5 cents per ton to a total of 51 cents for the entire distance from Cumberland to Georgetown. The additional revenue from this action was needed to finance the program of improvements on the waterway.¹¹⁷
8. April 6, 1875: The board reduced the toll on coal to 43 cents per ton plus 5 cents for wharfage at Cumberland. For the first time the board adopted a system of rebates amounting to 5 to 10 cents per ton on the published rates for coal companies shipping large quantities of coal on the canal. This action was taken to maintain the position of the canal in the coal trade vis-à-vis the railroad.¹¹⁸

¹¹¹ *Ibid.*, K, 329–330

¹¹² *Ibid.*, K, 382.

¹¹³ *Thirty-Seventh Annual Report* (1865), C & O Co., 6.

¹¹⁴ *Proceedings of the President and Board of Directors*, K, 511.

¹¹⁵ *Ibid.*, L, 10.

¹¹⁶ *Fortieth Annual Report* (1868), C & O Co., 5–6, and *Forty-Fifth Annual Report* (1873), C & O Co., 23–24.

¹¹⁷ *Proceedings of the President and Board of Directors*, M, 94; *Forty-Fifth Annual Report* (1873), 10–11; and *Cumberland Times*, May 31, 1873, in Arthur Pue Gorman Collection, University of North Carolina, Chapel Hill.

¹¹⁸ *Cumberland Daily Times*, March 20, 1875, in Gorman Collection, and *Forty-Seventh Annual Report* (1875), C & O Co., 39–44.

9. April 18, 1876: The nationwide depression reached the canal in 1876 and forced the directors to reduce the toll on coal to 41 cents per ton (plus 5 cents wharfage). The rebate system of 5 to 10 cents per ton remained in effect for large shippers.¹¹⁹

10. April 10, 1877: The year 1877 promised little improvement in canal trade or revenue since the country was still in the grip of the depression and a rate war between the canal and the railroad was in the offing. Accordingly, the board reduced the toll on the coal to 33 cents per ton (plus 3 cents wharfage). The rebate system of 5 to 10 cents per ton for large shippers remained in effect.¹²⁰

11. August 21, 1877: To keep in competition with the railroad, the board further reduced the tolls on coal to 22 cents per ton (plus 3 cents for wharfage) after September 1. Because the rates were so ruinously low already, the rebate system was withdrawn.¹²¹

12. April 10, 1878: Prospects for a marked recovery appeared to be slight as business remained generally depressed and coal prices continued their deflationary tendency. However, the state legislature came to the aid of the canal in 1878 by passing an act curbing the competitive practices of the Baltimore & Ohio Railroad. On the strength of this act the canal board raised tolls from 22 cents to 36 cents per ton from Cumberland to Georgetown and wharfage charges from 3 cents to 4 cents. At the same time, the board restored the rebate system for large shippers.¹²²

13. April 14, 1880: The efforts of the canal company to come to terms with its competitors involved both force and compromise. In 1880 it voluntarily cooperated with the Baltimore & Ohio and the Pennsylvania Railroad Company to fix charges on the coal trade at profitable levels. This arrangement enabled the board to raise the toll on coal to 51 cents per ton from Cumberland to Georgetown (plus 4 cents wharfage). The rebate system remained in effect for large coal shippers.¹²³

14. June 13, 1883: In the face of renewed bitter competition among the coal carriers, Messrs. Winship, Martens, Agnew and Hassett petitioned the board to reduce the rate on coal. Accordingly, the toll on coal was lowered to 36 cents per ton (plus 4 cents wharfage). The rebate system was maintained for large shippers as a further hedge against the inroads of the Railroad on the canal coal trade.¹²⁴

15. April 10, 1884: Upon the petition of a large delegation of Cumberland boat owners and captains and coal shippers, the board reduced the toll on coal to 33 cents per ton from Cumberland to Georgetown (plus 3 cents wharfage). At the same time, the rebate system was repealed.¹²⁵

¹¹⁹ *Proceedings of the President and Board of Directors*, M, 255.

¹²⁰ "Draft of Resolution," 1877, Ltrs. Sent, C & O Co.; *Proceedings of the President and Board of Directors*, M, 296; and Gorman to Garrett, April 10, 1877, Ltrs. Sent, Gorman Collection.

¹²¹ *Proceedings of the President and Board of Directors*, N, 4.

¹²² *Fiftieth Annual Report* (1878), C & O Co., 11–12, and *Proceedings of the President and Board of Directors*, N, 20.

¹²³ *Proceedings of the President and Board of Directors*, N, 101–102.

¹²⁴ *Ibid*, N, 220.

¹²⁵ *Ibid*, N, 251.

16. February 6, 1885: In the face of the continuing cutthroat competition of the Baltimore & Ohio Railroad, the board reduced the toll on coal to 22 cents per ton (plus 4 cents wharfage).¹²⁶
17. March 4, 1887: The board raised the toll on coal to 36 cents per ton from Cumberland to Georgetown (plus 4 cents wharfage).¹²⁷
18. April 27, 1887: Following the protests of the large Cumberland coal companies to the board's action on March 4, a revised set of tolls was established on coal. For the first time the directors made a distinction in toll charges between coal destined for the District cities in which there would be less rivalry and that which was intended for transshipment to other Eastern markets. The board fixed the rate for the latter at 30 cents per ton (plus 4 cents for wharfage) from Cumberland to Georgetown while locally-consumed coal paid 36 cents per ton (plus 4 cents wharfage).¹²⁸
19. February 14, 1888: The board raised the toll on coal destined for the District cities to 40 cents per ton (plus 4 cents wharfage) in order to produce increased revenue. At the same time, it left the rate on coal for the coastwise trade at the same level as the previous year.¹²⁹

B. IRREGULAR UPWARD COURSE OF CANAL TRADE, 1851–1860

When the canal was completed to Cumberland, canal officials, as well as many Potomac Valley residents, eagerly anticipated a new era of prosperity. At the ceremonies in Cumberland formally opening the canal to navigation on October 10, 1850, William Price, a long-time promoter of the waterway, voiced the expectation by observing:

The capacity of the canal is practically unlimited. All the coal companies have their railroads and other means of shipment upon the canal, completed. With such a staple and such an avenue to market, what is to limit the emoluments of the work? Coal, however, is but one item of its trade. And when we look to the agricultural products of Western Maryland, and of the contiguous portions of Virginia and Pennsylvania, and after all this, add to the account, the ascending trade, consisting of the merchandize for the supply of the territory already indicated, and a share of that destined for the west, it is no exaggeration to say, that, the work will in due time pay off its own debt and leave the state in possession of a permanent fund, adequate to all her financial wants.¹³⁰

Several weeks later the publishers of the Frederick *Examiner* commented that

we earnestly hope and feel persuaded, these expectations will be more than realized. If so, it will not be long before Maryland can hold her head proudly up and say - I am out of

¹²⁶ *Ibid.*, N, 308.

¹²⁷ *Ibid.*, N, 356.

¹²⁸ *Ibid.*, N, 360.

¹²⁹ *Ibid.*, N, 372, and *Sixty-First Annual Report* (1889), C & O Co., 7.

¹³⁰ Cumberland *Civilian* quoted in *Report to the Stockholders on the Completion of the Canal*, 131.

debt, and prosperity is before me. I now take rank with the proudest of the Sister States of this glorious confederacy.¹³¹

Total Tonnage and Toll Revenue

The glowing expectations of rapid commercial growth and immediate economic prosperity were not realized in the 1850s. During this period the canal trade followed an irregularly upward course. Tonnage doubled between 1850 and 1851, soaring to 203,893 tons. Thereafter it moved to new peaks in cycles of two- and three-year duration. The following list illustrates this point:

	<u>TONNAGE</u>	<u>TOLLS</u>
1851	203,893	\$110,504.43
1852	167,595	92,248.90
1853	270,705	145,100.54
1854	235,923	119,306.03
1855	283,252	138,675.84
1856	287,836	153,051.56
1857	196,525	94,802.37
1858	353,588	171,085.97
1859	359,716	189,134.57
1860	344,532	¹³² 182,343.86

Ascending and Descending Trade

A breakdown of the total tonnage into the two categories of ascending and descending trade reveals that the amount of articles transported up the canal during the 1850s varied between some 2 and 10 percent of the total canal business. Accordingly, the tonnage moving down the waterway varied between some 90 to 98 percent of the aggregate commerce on the canal. The following list illustrates this point:

	<u>ASCENDING</u>	<u>DESCENDING</u>	<u>TOTAL</u>
1851	22,951	180,942	203,893
1852	16,226	151,369	167,595
1853	21,495	249,210	270,705
1854	18,724	217,199	235,923
1855	24,839	287,836	283,252
1856	15,028	272,808	287,836
1857	21,152	175,373	196,525
1858	29,396	324,192	353,588
1859	8,630	351,086	359,716
1860	9,999	334,533	¹³³ 344,532

Principal Articles of Ascending and Descending Trade

¹³¹ Frederick *Examiner*, October 23, 1850.

¹³² See Appendices R and G.

¹³³ See Appendices B and C.

An examination of the ascending and descending trade statistics provides an interesting study of the principal articles transported on the canal in each of these categories. The chief items in the ascending trade throughout the decade were fish (salt and fresh), groceries, salt, lumber, plaster, ore and manures. The main articles transported in the descending commerce were coal, coke, pig iron, lumber, flour, wheat, corn and offal. The following list amplifies this subject:

ASCENDING TRADE								
	FISH	GROCERIES	SALT	LUMBER	PLASTER	ORE	MANURES	TOTAL
1851	1,335	642	2,263	1,534	6,560	5,239	1,079	22,951
1852	455	402	2,851	1,484	5,489	2,715	1,325	16,226
1853	1,387	658	2,433	1,983	6,390	5,074	1,410	21,495
1854	1,054	543	1,852	1,494	3,298	5,220	3,302	18,724
1855	981	473	2,342	1,748	3,774	3,721	3,031	24,839
1856	960	356	1,762	1,679	2,276	3,903	2,297	15,028
1857	490	195	1,539	1,366	2,136	3,069	1,300	21,152
1858	217	178	1,945	884	2,813	190	1,504	29,396
1859	248	220	1,556	947	2,735	0	1,739	8,630
1860	322	74	1,385	853	2,741	0	1,898	¹³⁴ 9,999

DESCENDING TRADE									
	FLOUR	WHEAT	CORN	OF-FAL	LUM-BER	PIG IRON	COAL	COKE	TOTAL
1851	27,761	6,861	5,783	994	2,736	910	82,690	1,161	180,942
1852	26,755	9,805	4,755	832	2,640	1,650	63,289	2,346	151,369
1853	25,602	9,906	8,327	1,131	3,606	2,418	151,959	4,593	249,210
1854	15,643	5,417	2,618	538	2,588	201	145,319	3,633	217,199
1855	14,240	6,986	628	388	3,051	2,505	188,029	3,060	258,413
1856	14,853	9,017	6,893	425	3,209	2,541	205,568	3,110	287,836
1857	10,967	3,750	5,592	288	1,847	1,212	125,526	2,045	175,373
1858	11,007	4,402	6,275	549	2,669	933	254,684	0	324,192
1859	12,106	5,531	4,931	391	2,810	967	300,743	0	351,086
1860	11,087	5,452	3,048	518	2,593	96	283,249	¹³⁵ 0	344,533

Factors Influencing the Expansion of Canal Trade

Despite the overall expansion of canal trade during the 1850s the fluctuations experienced in its development were discouraging at best. There were three principal causes for the indifferent course of canal prosperity during the decade: (1) the frequent interruptions of navigation due to floods, breaches and droughts; (2) the disappointing volume of coal shipped via the canal during the early 1850s; and (3) the poor agricultural harvests in the Potomac Valley. Throughout the decade these problems were exacerbated by the competition of the Baltimore & Ohio Railroad.

The irregular course of canal fortunes was largely the result of the unreliability of the canal as a carrier. In 1851, the first full year of operation of the entire canal, there were slight interruptions to the trade as a result of breaches and low water.¹³⁶ During the first six weeks of the boating season in 1852 the canal trade flourished as 37,621 tons of goods passed over the water-

¹³⁴ See Appendix B.

¹³⁵ See Appendix C.

¹³⁶ *Twenty-Fourth Annual Report* (1852), 6.

way. However, the highest flood in the history of the canal struck the valley in April and navigation was not restored until the end of July. Several breaches in the canal embankments occurred in August and September interrupting navigation for another month.¹³⁷ During the period from June 1853 to June 1854 the progress of the canal trade was checked considerably by an obstruction at Dam No. 5.¹³⁸ A severe drought between Cumberland and Dam No. 6 during the summer months of 1854 suspended the coal trade for eight weeks.¹³⁹ Navigation was again suspended for nearly four weeks in August 1855 when a road culvert was undermined and carried away following a heavy rain.¹⁴⁰ A heavy ice freshet in the spring of 1857 caused extensive damage to Dams Nos. 4 and 4, suspending traffic on the canal for several months.¹⁴¹ Rock slides in the deep cut below Paw Paw Tunnel in November 1857 and the spring of 1858 stopped navigation for more than two months.¹⁴² Two freshets in April and September 1859 caused serious breaches in Dam No. 4, thus limiting the extent of boat traffic that season.¹⁴³

The volume of coal shipped via the canal proved to be disappointing in the early years of the decade. At the inaugural ceremonies at Cumberland on October 10, 1850, President James M. Coale stated:

The canal commences its operations under flattering auspices. The circumstances which surround and attend the opening [of] navigation, are of the most favorable character. Unlike other works, constructed with a view principally to the coal trade, it is not required to await the slow process of preliminary preparations...The coal mines have been opened, the laborers have been gathered, facilities of connection with the canal basin, have been constructed, and the coal trade of Allegany is already considerably advanced. Little more is necessary, than for it to turn to its appropriate channel - the canal - and go on increasing.¹⁴⁴

This theme was amplified in a report to the stockholders in February 1851 in which it was stated that the canal was "destined to be the carrier of the coal and iron and other articles of heavy burden" in the Potomac Valley. The coal mines west of Cumberland were connected with the canal basin at Cumberland by two railroad lines, one belonging to the Maryland Mining Company extending into Braddock's Run Valley and the other to the Mount Savage Iron Company passing through Jenning's Run Valley. These two lines were considered to be capable of bringing more than 1,000,000 tons of coal to the canal annually. Projects were underway to increase the means of transportation between the mines and the canal and it was expected that within several years the coal trade would produce prosperity to the waterway.¹⁴⁵

The canal board announced in February 1851 that the coal trade promised to be a profitable one that year. During the fall and winter of 1850 and 1851 the canal directors observed that the price of Cumberland coal had greatly increased after the opening of the entire length of the canal. Large sales of coal had recently been negotiated by the Allegany County coal companies.

¹³⁷ *Twenty-Fifth Annual Report* (1853), C & O Co., 3-4, and Ringgold to O'Neal, Dec. 16, 1852, Ltrs. Sent, C & O Co.

¹³⁸ *Twenty-Sixth Annual Report* (1854), C & O Co., 7-8.

¹³⁹ *Twenty-Seventh Annual Report* (1855), C & O Co., 5-6.

¹⁴⁰ *Proceedings of the Stockholders*, E, 6-7.

¹⁴¹ *Ibid.*, E, 59.

¹⁴² *Ibid.*, E, 62-63.

¹⁴³ *Thirty-Second Annual Report* (1860), C & O Co., 7, 16-17.

¹⁴⁴ Cumberland Civilian quoted in *Report to the Stockholders on the Completion of the Canal*, 135.

¹⁴⁵ *Report to the Stockholders on the Completion of the Canal* (1851), 121, 126-127.

A heavy concentration of capital, primarily from the Eastern seaboard, had been invested in the western Maryland coal industry.¹⁴⁶

However, the promising coal trade did not materialize as expected. By June the directors reported to the stockholders that the canal trade

during the present season compares very favorably with any former year, in the leading articles of transportation (flour, wheat, corn and coal); but we regret to say in the article of coal, there has so far, been less transported, than we were induced to expect from the representatives of the various mining companies..

Although 20,319 tons of coal had been transported on the canal between January 1 and May 31 compared to 807 tons over the same period the previous year, the amount was well below the figure for which the directors had hoped. The reasons for the faltering coal trade were attributed to (1) the shortage of boats of which there were only 140, (2) the efforts of the coal companies to pressure the board into lowering the rate on coal to 25 cents a ton before committing the transportation of their product to the waterway, and (3) the competition of the Baltimore & Ohio Railroad.¹⁴⁷

During the last six months of 1851 the coal trade increased, making a total of 82,799 tons for the year. Some 65 new boats were put on the canal during this period, increasing the number of craft on the waterway to 205 of which about 140 were involved in the transportation of coal. The board rejected all pressures to reduce its tolls on coal—(1/4 cent a ton per mile—aggregate toll 46½ cents a ton from Cumberland to Georgetown)—stating that its rates were the lowest on any American waterway.

For its part, the Baltimore & Ohio was attempting to undercut the canal's attempt to attract the Cumberland coal trade by reducing its charges on transporting coal from the latter city to tidewater from \$2.57 per ton in October 1850 to \$1.75 by the spring of 1852. When these figures were compared with the canal's tolls on coal and on the boats (4 cents per mile for the first 20 miles, 2 cents per mile thereafter, making a total of \$4.10), the railroad had a decided advantage. Thus, the amount of coal shipped over the railroad in 1851 was 174,701 tons or more than double that of the canal.¹⁴⁸

The directors looked forward to a banner year in the coal trade in 1852 as executives of the Cumberland mining concerns indicated that they intended to ship 300,000 tons on the waterway. However, the heavy flood in April ended these expectations, and the coal companies made arrangements to ship their product on the railroad. As a result, the amount of coal transported on the canal declined to 65,719 tons while that on the railroad increased to 268,459 tons.¹⁴⁹

Despite the disappointment in the development of the coal trade the directors continued to exude optimism in their reports to the stockholders. In June 1853 the board observed that the mining companies in Allegany County were rapidly extending their operations in working the mines and providing railroad cars, canal boats and sea vessels to transport their coal to the eastern seaboard and to foreign markets. Thus, within three years, the board expected the canal coal trade to reach its long-predicted potential.¹⁵⁰

Within a year this optimistic forecast was partially negated by a two-month strike at the mines in the spring of 1854. Moreover, a series of breaches, droughts and freshets convinced

¹⁴⁶ *Ibid.*, 126-127.

¹⁴⁷ *Twenty-Third Annual Report* (1851), 7-8.

¹⁴⁸ *Proceedings of the stockholders*, D, 431-432, and Ringgold to O'Neal, Dec. 26, 1851, Ltrs. Sent, C & O Co.

¹⁴⁹ Ringgold to O'Neal, Dec. 16, 1852, Ltrs. Sent, C & O Co., and *Twenty-Fifth Annual Report* (1853), 3-4.

¹⁵⁰ *Twenty-Fifth Annual Report* (1853), 7-8.

many of the mine operators of the unreliability of the canal as a carrier and accordingly transferred their business to the railroad. The tonnage of coal carried over the two lines from 1853 to 1856 demonstrates the pace at which the railroad was outdistancing the canal for the Cumberland coal trade:

	B. & O. RR.	C. & O. Canal	TOTAL
1853	376,219	157,760	533,979
1854	503,836	155,845	659,681
1855	478,486	183,786	662,272
1856	502,330	204,120	706,450 ¹⁵¹

Gradually, the canal directors lost their earlier optimism and their reports to the stockholders became both more realistic and more desperate. In 1855 they complained that the shortage of coal boats and the interruptions to navigation had placed the waterway at a great disadvantage with the railroad in the competition for the coal trade. Moreover,

On the completion of the canal to Cumberland, with a view of establishing the coal trade as early as practicable on a solid basis, the toll upon coal was put at a lower rate than that charged upon any other work, with assurances from those representing the coal interests, that an early, large and yearly increasing transportation of coal could be relied upon; these promises have been delusive. Although the rate of toll remains still at this low rate, which at the time it was fixed, was regarded only as a temporary measure, to aid in establishing the trade so firmly that it would in a short period admit of higher rates being charged, it has been without effect; and until the trade can be so established, it is not deemed advisable to advance the rates.¹⁵²

The following year the directors pointedly stated that the success of the company was "dependent upon the coal trade from the Allegany region, and until this be developed to a much greater extent than it has yet been, we cannot anticipate any material amendment of its finances." What particularly alarmed the directors was that the railroad had nearly doubled its coal tonnage since 1852 despite raising its freight prices from \$1.75 to \$2.75 per ton from Cumberland to Baltimore. At the same time the canal's coal tonnage had risen slightly although its toll and freight charges had declined to \$1.81 per ton from Cumberland to tidewater. The only explanation for such a course of events was the unreliability of the canal navigation.¹⁵³

After the flood of 1857 drove the canal's coal trade to a six-year low, the demand for coal in the District cities in 1858–60 produced a sharp increase in the tonnage on the canal. The total amount of coal carried on the railroad and the canal during this period was as follows:

	B. & O. RR.	C. & O. Canal	TOTAL
1857	465,912	116,574	582,486
1858	395,405	254,251	649,656
1859	426,512	297,842	724,354

¹⁵¹ *Twenty-Sixth Annual Report* (1854), 7–8; *Twenty-Seventh Annual Report* (1855), 5–6, 10, 13–14 & Appendix H.

¹⁵² *Twenty-Seventh Annual Report* (1855), 13.

¹⁵³ *Twenty-Eighth Annual Report* (1856), in *Proceedings of the Stockholders*, E, 7–8, 14–15, 21–22, and *Twenty-Ninth Annual Report* (1857), C & O Co., 7–9.

1860	493,031	295,878	788,909 ¹⁵⁴
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Poor crops in the Potomac Valley and the competition of the Baltimore & Ohio Railroad were all responsible for the irregular trade on the canal during the 1850s. During the middle years of the decade droughts during the summer growing season resulted in severe wheat, corn and grain crop losses to valley farmers. Thus, the canal's descending trade in flour, wheat and corn—the three staples of its agricultural commerce—declined by almost half in 1854 and 1855:

	Flour	Wheat	Corn
1851	25,761	6,861	5,783
1852	26,755	9,805	4,755
1853	25,602	9,966	8,327
1854	15,643	5,417	2,618
1855	14,240	6,986	628

The canal did not regain its pre-1854 totals in the descending agricultural trade during the remainder of the decade as the railroad reduced its rates on these articles to accommodate Baltimore's burgeoning milling industry, the majority of which products were designed for foreign export. The irregular course of the descending agricultural trade from 1856 to 1860 was as follows:

	Flour	Wheat	Corn
1856	14,853	9,017	6,893
1857	10,967	3,750	5,592
1858	11,007	4,402	6,275
1859	12,106	5,531	4,931
1860	11,087	5,452	3,048 ¹⁵⁵

Efforts to Stimulate Trade during the 1850s

During the first decade after the completion of the canal to Cumberland, the board tried various ways of stimulating commerce. In 1851 they granted permission to the G. L. Thompson Company and others for the construction of basins on the towpath side of the Georgetown Level to encourage the development of transfer facilities there. This decision, which aided private parties "to ascertain the best and most convenient mode of handling and unloading or transshipping coal upon its arrival at tidewater," was made subject to five conditions:

1. The quantity of water used was not to exceed the amount used in the normal locking from the canal into the river and back
2. The works constructed were to be substantial, permanent, and watertight.
3. Moveable bridges were to be built across the entrance to the basins so that navigation on the canal would not be interrupted by the absence of a continuous towpath. When boats entered or exited from the basins, they were not to interrupt canal traffic for more than four minutes.

¹⁵⁴ See Appendix H.

¹⁵⁵ Twenty-Seventh Annual Report (1855), 10, 13–14; Twenty-Eighth Annual Report (1856), in *Proceedings of the Stockholders*, E, 7; and Appendix C.

4. All plans for the basins were to be approved by the chief engineer.
5. If the agreement were violated or if the basins were abandoned, the works were to be removed and the towpath restored at the expense of the owner.

As the first sites for these experimental basins, the directors allowed the interested parties to use the College Run vicinity and several small pieces of ground above the Potomac Aqueduct.¹⁵⁶

Following the decline of trade in the middle of the decade, the directors initiated a series of changes to stimulate business on the waterway in 1856. They requested the Alexandria Canal Company to keep its locks open later in the evening, until 8 p.m.¹⁵⁷ Packets were deprived of their right-of-way over loaded freight boats descending the canal in order to reduce the delays in the passage of trade on the canal.¹⁵⁸

The late spring of 1856 saw the successful completion of a major undertaking along the banks of the canal in western Georgetown, which was designed to improve the shipping facilities. After nearly four years of agitation by Georgetown business leaders and negotiations between property owners and the canal company, the towpath between Frederick (present day 34th) and Warren (present day 37th) Streets was changed from the southern to the northern side of the canal. A new towpath bridge was constructed across the canal above the aqueduct near Warren Street over which the mules and drivers could pass from the upper to the lower towpath. This move left the lower bank free from the construction of sorely-needed unloading facilities, including basins, wharves and railway chutes connecting directly with the riverfront.¹⁵⁹

To augment the small coal trade the canal company in June 1856 directed the Baltimore & Ohio Railroad to permit the construction of a spur from Cumberland Coal and Iron Company's railroad across the tracks of the former to a projected wharf on the canal. This procedure had been provided for in a contract between the two companies in 1851 by which the canal company permitted the railroad to effect a connection at Cumberland with the western section of its main line. In return, the railroad agreed to allow its tracks to be crossed by other railroads seeking to reach the canal basin at Cumberland from the mines in the Frostburg, Georges Creek and Savage River districts of western Maryland, when so requested by the canal directors.¹⁶⁰

The board also considered several proposals for the improvement of the canal itself to facilitate the expansion of trade. Among the most important of these were plans for raising the Georgetown bridges to accommodate the larger vessels on the waterway, the installation of a steam pump near the mouth of the South Branch (the original site for feeder Dam No. 7, which had never been built), for the repair or replacement of Dams Nos. 1-5, all of which were leaking badly, and for the renovation of the Washington branch.¹⁶¹ Because of financial difficulties, natural disasters and the Civil War, most of these projects were delayed or forgotten. The raising of the Georgetown bridges was not completed until 1867. A steam pump was erected at the mouth of South Branch in 1856, but it failed to relieve entirely the summer water shortages on the canal

¹⁵⁶ *Proceedings of the President and Board of Directors*, H, 416-429. Agreements were made with Alexander C. Ray in August 1855, James R. Wilson in June 1858 and W. A. Bradley in June 1859 to build such basins in Georgetown for the unloading of coal. *Ibid*, I, 194-195; K, 39, 111.

¹⁵⁷ *Ibid*, I, 248.

¹⁵⁸ *Ibid*, I, 251-252.

¹⁵⁹ *Proceedings of the President and Board of Directors*, I, p.252, and *Proceedings of the Stockholders*, E, 11-12.

¹⁶⁰ *Proceedings of the President and Board of Directors*, I, pp.267-268. The Baltimore and Ohio had agreed to this arrangement in 1851 because the approval of the canal company to its line in Cumberland was necessary in view of the decision of the Maryland Court of Appeals in 1832 sustaining the claim of the canal company to the right of prior location of its waterway in the Potomac Valley.

¹⁶¹ *Proceedings of the President and Board of Directors*, H, 453; *Proceedings of the Stockholders*, D, 411; *Twenty-Fourth Annual Report* (1852), 4-6; *Twenty-sixth Annual Report* (1854), 5-6; and *Twenty-Seventh Annual Report* (1855), 4-5, 7.

between Cumberland and Dam No. 6. Some fruitless efforts were made to tighten Dams Nos. 1-3, and Dams Nos. 4 and 5 were replaced by masonry structures in the late 1860s. The Washington branch was never restored, but instead deteriorated into a cesspool of filth.

C. DECLINING TRADE ON THE CANAL DURING THE CIVIL WAR 1861-1865

The outbreak of the Civil War in April 1861 came at a time when the fortunes of the waterway appeared to be approaching their lowest point. As a result of the secession of Virginia, the canal found itself on the border between the Union and the Confederacy, in the path of the marauding armies. During the first two or three years of the conflict, its trade was greatly reduced and its works alternately occupied and/or destroyed by the opposing forces. Furthermore, the war adversely affected the canal trade by destroying or curtailing its markets and damaging many mills along its course. The condition of the company and its properties materially deteriorated from even their gloomy pre-war status. Only toward the end of the war when interference with navigation declined did its trade and financial status improve.¹⁶²

The hostilities had an adverse effect on the canal trade through the destruction of its markets outside the Potomac Valley as well as through the damage to the mills along its course. The existence of a state of war reduced the coastal trade, which had created some of the demand for canal coal. As part of the Union's Southern blockade policy, the Treasury Department announced in April 1862 that henceforth the coastwise shipment of coal would be restricted to the region north of the mouth of the Delaware River. This was a heavy blow to the fortunes of the canal as two of the better markets for its coal were South America and the British West Indies.¹⁶³ In the area above the mouth of the Delaware, the Cumberland coal faced severe competition from the Pennsylvania Broad Top coal, on which the Pennsylvania Central Railroad already had reduced its charges by 30 cents per ton.¹⁶⁴ The institution of the Potomac blockade by federal forces also handicapped the coastal trade of canal coal from the port of Georgetown.¹⁶⁵ The subsequent releasing of the shipping restrictions were welcomed in April 1862 when the Treasury modified its prohibition to read "ports north of Cape St. Rogue, South America, and west of that longitude."¹⁶⁶ The canal officers were further heartened when the blockade of the Potomac was withdrawn in the same month when fears of a Southern invasion up the river had subsided.¹⁶⁷

The effect of the war on some of the mills along the canal can be seen in the experiences of the Potomac Cotton Foundry in Georgetown and Jacob Miller's above Antietam Creek. The former, a large cotton factory and a user of water power from the canal, was cut off from its supply of raw material and forced to close down in 1861. The reasons given for the shut-down were high wages, high prices, scarcity of raw cotton, lack of markets for finished goods and ruined credit.¹⁶⁸ The latter was caught in the ebb and flow of military operations and forced to stop operations in the fall of 1862. The mill was occupied by troops in the spring of that year, and after that it was idled because of the lack of water power from the damaged canal from July 1 to 12, for twelve days in August, and from September 14 on. During the last period of suspension, the mill

¹⁶² Walter S. Sanderlin, *The Great National Project: A History of the Chesapeake & Ohio Canal* (Baltimore, 1946), 212-222. A more complete treatment of the canal during the Civil War will be the subject of a later chapter in this Historic Resource Study.

¹⁶³ *Washington National Intelligencer*, Apr. 21, 1862, and *Forty-Fifth Annual Report* (1873), C & O Co., 16.

¹⁶⁴ Greene to Ringgold, Apr. 11, 1862, Ltrs. Recd., C & O Co.

¹⁶⁵ *Washington Evening Star*, May 2, 1861.

¹⁶⁶ *Washington National Intelligencer*, Apr. 21, 1862

¹⁶⁷ *Ibid.*

¹⁶⁸ Williamson and Company to President and Directors, June 20, 1861, Ltrs. Recd., C & O Co.

was again occupied by troops, first as a hospital after the Battle of Antietam and then as a picket's rendezvous. When the soldiers moved out, they left the mill a wreck, taking everything moveable with them and destroying what they could not carry off.¹⁶⁹

The effect of the restrictions and destructions of the war on the business of the canal was almost disastrous. Military operations resulted in the virtual extinction of canal trade from late April to early August 1861, causing the company president to report that there was "comparatively no business on the canal before September."¹⁷⁰ The lack of trade can be graphically seen when the tolls received for this period are compared with those of the previous year:

	1860	1861
May	\$19,214.19	\$657.36
June	18,529.60	206.27
July	23,051.10	16.94
August ¹⁷¹	23,005.02	2,444.07

September and October, generally the most active months for the canal, showed only a slight revival but they were still well below prewar levels:

	1860	1861
September	\$33,084.04	\$10,509.22
October ¹⁷²	32,547.54	17,793.22

All told the year 1861 was a disaster when its total trade was compared with that of the previous year. The total tonnage and tolls for the two years were as follows:

	1860	1861
ASCENDING	9,999 tons	3,250 tons
DESCENDING	334,533 tons	144,814 tons
TOTAL	344,532 tons	148,064 tons
TOLLS ¹⁷³	\$182,343.86	\$70,566.99

From a business standpoint, the following year 1862 was on the whole even worse. Although there was no single month as poor as May, June or July 1861, between the seizure of the canal boats in the spring and the rebel raids in the summer and fall, no month witnessed a satisfactory amount of business. Up until May 31 only 25,259 tons of coal had been [shipped and the tolls] collected were only \$18,449.86, both of which statistics did not comprise one prosperous month of trade.¹⁷⁴ So complete was the severance of trade that in August an agent of one of the coal companies and a director of the canal wrote, "There has been no real through navigation on the canal this year."¹⁷⁵ The invasion of Lee in September and October ruined the trade on the canal

¹⁶⁹ Miller to President and Directors, May 1, 1863, Ltrs. Recd., C & O Co.

¹⁷⁰ *Thirty-Fourth Annual Report* (1862), C & O Co., 3.

¹⁷¹ *Thirty-Third Annual Report* (1861), C & O Co., Appendix C, 14, and *Thirty-Fourth Annual Report* (1862), C & O Co., Appendix B, 9.

¹⁷² *Ibid.*

¹⁷³ *Thirty-Fourth Annual Report* (1862), C & O Co., 8.

¹⁷⁴ *Ibid.*, 3–6.

¹⁷⁵ Greene to Ringgold, Aug. 11, 1862, Ltrs. Recd., C & O Co.

for these months and the tolls fell to \$5,282.48 and \$538.78 respectively.¹⁷⁶ The total tonnage carried on the waterway for the year was 126,793 (ascending 2,603; descending 124,190) and the total tolls collected were \$63,985.85 both of which figures were the lowest since the canal had been completed to Cumberland.¹⁷⁷

There was a revival of trade on the canal in 1863 as military movements in the area caused fewer interruptions to the navigation than in the two proceeding years. The canal's recovery, however, was set back by rebel activity from mid-June to late August during the Gettysburg campaign of the Army of Northern Virginia. July of that year was the worst single month of canal navigation since July 1861 as a mere \$480.06 in tolls were collected.¹⁷⁸ Besides this interference, there were no other major interruptions and the ascending tonnage rose by more than 10 percent to 2,936 tons, the descending tonnage more than doubled to 262,911 and the total tonnage increased to 265,847. The revenue from tolls for the [year] rose by more than \$90,000 to \$154,928.26. Had it not been for the interruptions of the Gettysburg campaign, the toll revenues would have superceded the total of any previous year.¹⁷⁹

An active trade began on the canal in the spring of 1864, giving promise of the best year in the waterway's history. The coal trade was so prosperous that the company was confident enough to raise the toll on coal from 3/8 cent to ½ cent a ton per mile in July. However, Early's raid that month, followed by Mosby's and White's incursions in August and September, severely curtailed the volume of commerce on the canal for the normally most profitable months of the year. The month of August saw no through navigation at all, and the \$398.80 in tolls collected gave the canal its new low for a single month since July 1861.¹⁸⁰ Nevertheless, the business on the canal for the year was the best to date as the total tonnage rose to 290,772 tons and the amount of tolls received increased to \$225,897.34.¹⁸¹

Canal officials looked forward to a banner year in trade in 1865 because of the lessening of tensions in the Potomac Valley and the quantity of products at Cumberland ready to be shipped. Although heavy ice on the western levels delayed the commencement of navigation until April and a partial suspension in coal shipments reduced the tonnage in May and June by nearly one-half, commerce was active for the rest of the year with only several minor interruptions. The problems in the coal market were the result of the high rates previously paid for mining and transportation, which the coal companies were unable to continue, and the miners and transporters were unwilling to reduce. Up until May 31 the amount of coal shipped was only 61,677 tons compared to 101,390 tons for the same period in 1864. Nevertheless, the brisk business, which followed the settlement of the controversy more than made up for the loss as the total tonnage of coal in 1865 reached a high of 340,736 tons, compared with 260,368 tons the previous year. All told the total tonnage and the tolls collected reached new highs of 372,335 tons and \$346,165.47, respectively.¹⁸²

Perhaps the most severe set-back in business experienced by the canal due at least in part to the irregularity of navigation during the war was the loss of more than half of its share of the flour trade. Complaining that they could not rely on the canal for even a 10-day period, many of the valley mill operators turned to the more dependable railroad.¹⁸³ Despite the determined effort

¹⁷⁶ *Thirty-Fifth Annual Report* (1863), C & O Co., 6.

¹⁷⁷ See Appendices B, C and E.

¹⁷⁸ *Thirty-Sixth Annual Report* (1864), C & O Co., Appendix B, 10.

¹⁷⁹ *Ibid.*, 3, 8.

¹⁸⁰ Washington *Evening Star*, Aug. 22, Sept. 13, 1864 and *Thirty-Seventh Annual Report* (1865), C & O Co., 6, 10.

¹⁸¹ *Thirty-Seventh Annual Report* (1865), C & O Co., 3.

¹⁸² *Thirty-Seventh Annual Report* (1865), 3, 6–7; Hagerstown *Mail*, Feb. 25, 1865; and Ringgold to Greene, Dec. 1, 1865, Ltrs. Sent, C & O Co.

¹⁸³ Embry and Son to Dellinger, April 26, 1862, Ltrs. Recd., C & O Co.

of the railroad to lure the flour trade away from the canal in the 1840s, the flour trade had continued to be one of the larger though erratic sources of canal revenue. From 14,880 tons in 1843, it rose to 25,761 tons in 1851 and fell to 11,087 tons in 1860. In 1861 it dropped to 7,067 tons, and after a slight recovery in 1862 (7,340 tons) and 1863 (8,566 tons), it declined to 5,962 tons and 5,383 tons in 1864 and 1865, respectively.¹⁸⁴

Despite the troubles in the early years, the canal was an important transportation agency during the war. Between raids and repairs the canal provided invaluable service for the Union, hauling troops and supplies, particularly coal, which the government hoarded.¹⁸⁵ The amount of coal transported on the waterway during the hostilities were as follows:

1861	119,893 tons
1862	94,819 tons
1863	229,416 tons
1864	260,368 tons
1865 ¹⁸⁶	340,736 tons

The canal provided the sole direct link between Washington and Harpers Ferry for the transportation of men and materials to that important post, as well as other points in the Potomac Valley.

Summary of Canal Trade during the Civil War

The bleakness of the early years of the conflict was largely reversed toward the end of the struggle. Despite continuing raids and occupation, business on the canal began to revive in 1863 and improved steadily until the end of the war. The trade statistics for the war period were:

	ASCENDING	DESCENDING	TOTAL
1861	3,250	144,814	148,064
1862	2,603	124,190	126,793
1863	2,936	262,911	265,847
1864	1,891	288,881	290,772
1865 ¹⁸⁷	2,707	369,628	372,335

The principal products of the ascending and descending trade were:

ASCENDING						
	FISH	FLOUR	SALT	LUMBER	PLASTER	MANURES
1861	139	674	604	143	856	643
1862	162	33	478	131	274	1,029
1863	200	21	535	102	574	632
1864	110	49	545	207	382	477
1865	104	100	498	543	664	647

¹⁸⁴ *Sixteenth Annual Report* (1844), Appendix No. 11, 46; *Twenty-Fourth Annual Report* (1852), Appendix B, 26; *Twenty-Third Annual Report* (1861), Appendix C, 16; *Thirty-Fourth Annual Report* (1862), Appendix B, 11; *Thirty-Seventh Annual Report* (1865), Appendix B, 12; and *Thirty-Eighth Annual Report* (1866), Appendix C, 15.

¹⁸⁵ *Washington National Intelligencer*, Mar. 10, 1862, and *Washington Evening Star*, Sept. 12, 1862.

¹⁸⁶ See Appendix C.

¹⁸⁷ See Appendix B & C.

DESCENDING					
	FLOUR	WHEAT	CORN	MILL OFFAL	LIMESTONE
1861	7,067	4,286	1,941	520	642
1862	7,340	6,640	1,027	534	1,936
1863	8,566	9,014	1,789	395	4,650
1864	5,962	6,168	1,914	254	4,727
1865	5,383	5,700	775	250	6,386

DESCENDING CONTINUED ¹⁸⁸					
	LUMBER	ROUGH STONE	LIME, CEMENT	COAL	WOOD
1861	1,994	2,852	467	119,893	3,773
1862	1,693	760	49	94,819	8,025
1863	1,403	19	794	229,416	4,513
1864	1,248	390	601	260,368	3,888
1865	1,216	2,900	1,004	340,736	3,971

The improvement in business was paralleled by increasing revenues. The general inflationary tendency of prices toward the end of the war also permitted the toll on coal to be raised from $\frac{1}{4}$ cent a ton per mile to $\frac{5}{16}$ cent a ton in April 1863, to $\frac{3}{8}$ cent a ton in April 1864 and finally to $\frac{1}{2}$ cent a ton in July 1864.¹⁸⁹ Annual revenues during the war soared from lows of \$70,566.99 in 1861 and \$63,985.85 in 1862 to \$154,928.26 in 1863, \$225,897.34 in 1864, and \$346,165.47 in 1865.¹⁹⁰

D. RESURGENCE OF THE CANAL TRADE IN THE POSTWAR ERA: 1866–1869

Factors Influencing the Development of Trade

The canal emerged from the war on both a somber note and a hopeful one. The waterway itself had suffered great physical damage from the activities of the opposing armies. Furthermore, the federal government continued to occupy the Potomac Aqueduct and a portion of the Rock Creek Mole until 1868 to the detriment of the canal's business.¹⁹¹ On the other hand, the company's finances had improved as a result of the revival of trade after 1863. Bankruptcy no longer threatened the immediate operation of the waterway, and the improved commercial and financial status of the company made it possible to undertake necessary and long-delayed repairs and improvements.

The physical condition of the canal in 1865 was much worse than it had been before the war. Despite growing trade and revenues and some increase in repair expenditures toward the end of the conflict, the waterway had been largely neglected. In addition to the destruction of its works in the war it had not received the attention required for normal maintenance. Only the most necessary repairs had been made, and then usually in a hasty and slip-shod fashion.¹⁹² The general state of deterioration of the canal was described as follows to the stockholders in June 1869:

¹⁸⁸ See Appendix C.

¹⁸⁹ *Proceedings of the President and Board of Directors*, K, 329, 382, 395.

¹⁹⁰ See Appendix G.

¹⁹¹ *Proceedings of the President and Board of Directors*, K, 511; L, 56; Moore to Ringgold, May 28, 1866; and Godey to Ringgold, Jan. 10, 1866, Ltrs. Recd., C & O Co.

¹⁹² Manning to President and Directors, May 31, 1866, Ltrs. Recd., C & O Co.

During the last ten years little or nothing had been done toward repairing and improving lock-houses, culverts, aqueducts, locks, lock-gates and waste weirs of the Company; many of them had become entirely unfit for use and were becoming worthless, rendering it absolutely essential to the requirements of the Company to have them repaired ...¹⁹³

The restoration and improvement of the canal began almost immediately after the conclusion of the war.¹⁹⁴ Construction of the masonry dams replacing the old structures at Dam Nos. 4 and 5 were resumed and were completed by the end of the decade. The company finally came to an agreement with the corporate authorities of Georgetown concerning the manner of raising the bridges over the canal, and the new structures were completed in 1867 by Duvall and Company at a cost of \$31,000.¹⁹⁵ Rock Creek was dredged, the tumbling dam at its mouth was restored, and the outlet lock repaired in 1867 by the firm of Deeter and Maynard at a cost of \$9,000 in anticipation of the resumption of trade through Georgetown.¹⁹⁶

While the main concern of the board during the postwar era was to restore the canal to a good navigable condition, it also took several steps to stimulate commerce. In January 1866 the directors ordered the removal of coal unloading platforms, built by the Cumberland Coal and Iron Company and the Borden Mining Company, which extended 10 feet over the berm of the prism and hence restricted navigation in Georgetown.¹⁹⁷ To encourage the expansion of the coal trade, company ground at strategic points along the canal was rented to the Cumberland shippers for use as coal yards and storage facilities.¹⁹⁸ Because of the seven-fold growth of the trade in rough stone during the period, permission was granted in February 1869 to the Maryland Free Stone Mining and Manufacturing Company for the construction of a wharf on Rock Creek below K Street.¹⁹⁹ As the expanding coal trade necessitated greater loading facilities at Cumberland, the board in February 1869 made provision for the construction of a new wharf, an adjacent water course, and a new railroad line from the Mount Savage Railroad to the wharf.²⁰⁰

The postwar years also had their difficulties. Heavy freshets occurred in the Potomac Valley in 1866 and 1868, the former sweeping away 60 feet of the temporary coffer Dam No. 5 and the latter carrying off one-half of Dam No. 1.²⁰¹ The end of the war also brought a decline in trade as the demand for coal lessened from the wartime peaks. At the same time wage disputes occurred between the miners and the coal companies, interfering with the coal trade in April 1866.²⁰² In the face of the deflationary tendency of coal prices and the decreasing demand for that product, the board reduced the tolls by some 24 percent to 3.8 mills per ton (or from 92 cents to 62.29 cents per ton from Cumberland to Georgetown) in September 1866, and back to ¼ cent a ton per mile (or 46½ cents per ton from Cumberland to Georgetown) in March 1868. Had the company not made these reductions, it would have lost its share of the Cumberland coal trade, which varied between 31 and 39 percent of the total during the period, to the Baltimore & Ohio

¹⁹³ *Forty-First Annual Report* (1869), C & O Co., 4–5.

¹⁹⁴ Manning to President and Directors, Feb. 1, May 31, 1866, Ltrs. Recd., C & O Co.

¹⁹⁵ *Thirty-Ninth Annual Report* (1867), 5.

¹⁹⁶ *Thirty-Eighth Annual Report* (1866), 4–5; *Thirty-Ninth Annual Report* (1867), 5.; *Proceedings of the President and Board of Directors*, K, 491–492; and *Fortieth Annual Report* (1868), C & O Co., 4–5.

¹⁹⁷ *Proceedings of the President and Board of Directors*, K, 471, 479.

¹⁹⁸ Ringgold to Hassett, Nov. 15, 1867, Ltrs. Sent, C & O Co.

¹⁹⁹ *Proceedings of the President and Board of Directors*, L, 139.

²⁰⁰ Spates to President and Directors of Baltimore and Ohio Railroad Company, Feb. 5, 1869, Ltrs. Sent, C & O Co.

²⁰¹ *Thirty-Ninth Annual Report* (1867), 5 and Mans to President and Directors, July 11, 1868, Ltrs. Recd., C & O Co.

²⁰² *Thirty-Eighth Annual Report* (1866), 3, 5; *Thirty-Ninth Annual Report* (1867), 3; Manning to Ringgold, Apr. 22, 1866, and Greene to Ringgold, April 27, 1866, Ltrs. Recd., C & O Co.

whose rate-cutting practices were causing great concern to canal officials.²⁰³ The interference of local political influence by the state Democratic Party machine also returned after the war with no less than four changes in canal administration occurring between 1865 and 1870.

Total Tonnage and Toll Revenues

Despite unsettled trade conditions, political interference, and the appropriation of large amounts for the restoration and improvement of the waterway, the financial condition of the company continued to improve. As a result of the statewide industrial and commercial boom, canal trade recovered quickly from each setback, rising to a new high each year and nearly doubling over the 4-year period. The total tonnage and receipts from toll collections for the period were:

	TONNAGE	TOLLS
1866	383,408	\$355,660.76
1867	521,402	374,932.75
1868	552,987	276,978.71
1869 ²⁰⁴	723,938	368,483.42

Ascending and Descending Trade

A breakdown of the total tonnage into the two categories of ascending and descending trade reveals that the amount of articles transported up the canal during the postwar years comprised less than 2 percent of the total canal trade. Accordingly, the tonnage moving down the waterway amounted to more than 98 percent of the aggregate commerce on the canal. The following list illustrates this point:

	ASCENDING	DESCENDING	TOTAL
1866	6,658	376,750	383,408
1867	10,160	511,242	521,402
1868	10,479	541,508	552,987
1869 ²⁰⁵	14,238	709,700	723,938

Principal Articles of Ascending and Descending Trade

An examination of the principal articles in the ascending and descending trade of the postwar years provides an interesting study. The chief items in the ascending trade throughout the period were fish (salted and fresh), flour, salt, lumber, ore, plaster and manures. The most important of these products was ore, which made up nearly 40 percent of the ascending trade of the 4-year period. The primary articles of the descending trade were flour, wheat, corn, lumber, pig and scrap iron, bricks, rough stone, lime cement, coal, bark, wood and limestone. The most important of these articles was coal, which comprised between 89 and 95 percent of the annual total tonnage. The following list illustrates these facts:

ASCENDING TRADE

²⁰³ *Hagerstown Mail*, Mar. 1, 1867; *Proceedings of the President and Board of Directors*, K, 511; L, 82, 89; *Thirty-Ninth Annual Report* (1867), 6; and *Fortieth Annual Report* (1868), 5–6.

²⁰⁴ See Appendices F and G.

²⁰⁵ See Appendices B and C.

	FISH	FLOUR	SALT	LUMBER	ORE	PLASTER	MANURES	TOTAL
1866	172	361	873	607	2,478	682	1,062	6,658
1867	277	128	794	705	5,067	1,328	959	10,160
1868	240	131	1,362	975	2,618	1,181	1,845	10,479
1869	297	158	1,280	1,923	7,000	792	1,476	14,238 ²⁰⁶

DESCENDING TRADE

	FLOUR	WHEAT	CORN	LUMBER	PIG & SCRAP IRON	BRICKS	ROUGH STONE
1866	2,620	4,946	6,307	1,852	612	240	589
1867	3,058	9,510	10,794	3,051	1,785	404	2,970
1868	2,120	9,164	5,502	2,936	2,225	3,057	4,503
1869	2,220	15,147	2,339	1,097	3,782	1,145	4,161

DESCENDING TRADE CONTINUED

	LIME CEMENT	COAL	BARK	WOOD	LIME STONE	TOTAL
1866	2,080	344,160	1,115	2,900	7,845	376,750
1867	3,143	458,009	705	1,931	10,091	511,242
1868	1,975	484,849	900	2,016	16,148	541,508
1869	1,985	661,828	1,104	2,492	11,204	709,700 ²⁰⁷

E. THE GOLDEN YEARS OF CANAL TRADE, 1870-1875

Factors Influencing the Development of Trade

The burgeoning industrial and commercial expansion of the state and nation in the early 1870s provided the most stable and prosperous period in the history of the waterway. The company enjoyed unprecedented financial profits, and for the first time the waterway gave promise of fulfilling the hopes of its promoters. The canal board continued the program of restoration and improvement, fostered the growth of trade to record levels, and continued payments on the long-term debts of the company.

Despite the repairs already made, there was still much to be done. Chief Engineer William R. Hutton recommended a thorough overhauling of the canal at an estimated cost of \$78,000 in 1871, including repairs to locks, aqueducts, culverts and the prism itself.²⁰⁸ By 1874, many of the canal's masonry structures had been repaired, the waterway had regained its full prism, and the strength of its banks had so increased that an April flood which completely submerged the canal on the levels below Dams Nos. 4 and 5 did no appreciable damage.²⁰⁹ The extent of canal improvements was at least partially reflected in the increased tonnage carried by the freight boats. The annual average rose from 109½ tons in 1872 to 112 in 1873 and to 113½ tons in 1874.²¹⁰

²⁰⁶ See Appendix B

²⁰⁷ See Appendix C.

²⁰⁸ Report by W. R. Hutton, *Chief Engineer, As to Condition of Chesapeake & Ohio Canal* (Annapolis, 1872), 3-30.

²⁰⁹ *Forty-Sixth Annual Report* (1874), C & O Co., 11-12, and *Proceedings of the President and Board of Directors*, M, 154-155.

²¹⁰ *Forty-Seventh Annual Report* (1875), C & O Co., 8-9.

Trade continued to improve somewhat irregularly in the first two years of the decade. From a total of 723,938 tons in 1869, commerce on the waterway fell off by nearly 9 percent to 661,772 tons in 1870, but soared by more than 46 percent to a record peak of 968,827 tons in 1871.²¹¹ The Shenandoah flood in October 1870, a strike of boatmen and dock laborers at Cumberland in 1871, and a four-month drought in the same year, which reduced the average tonnage of boats from 110–115 to 85–90 tons, did not appreciably interfere with the expanding prosperity of the waterway.²¹² Business was so active in 1871 and 1872 that canal shippers found it difficult to obtain enough coasting vessels to load coal at Georgetown. Stocks piled up on wharves forcing a deliberate curtailment of shipments over the canal.²¹³

The method of expediting trade on the Georgetown level soon became the major obstacle to the continued growth of business. Uploading and transfer facilities were unable to handle the increasing tonnage, which was brought to them. Nearly all the shipments from Cumberland were carried as far down as the Potomac Aqueduct, and two-thirds of them were unloaded on the overburdened wharves in Georgetown. As a result, boats experienced annoying and costly delays as they lined up in the canal to await their turn to unload and canal employees began to complain that it was almost impossible to maintain order.²¹⁴ [The Georgetown] level posed other problems in that the canal was not wide enough to accommodate the ordinary traffic to and from the Rock Creek Basin and the Potomac Aqueduct and the clamoring boatmen awaiting access to the coal wharves. Particularly serious was the congestion on the waterway between the aqueduct and Market Street where the coal boats waiting in line got in the way of the grain boats heading for the large flour mills in that vicinity.²¹⁵ In June it was reported that the large number of boats on the level had nearly stopped navigation as there was at one time "ten tiers of boats three abreast—20 tiers two abreast" and in several instances "4 boats abreast."²¹⁶ President James C. Clarke summarized conditions in the following words in December 1871:

As it is now, it is not infrequently the case that from sixty to eighty boats have to lie along the Canal bank singly, so as to allow sufficient room in the Canal for boats to pass in opposite directions. Often a string of loaded boats from half a mile to a mile in length is seen lying above the Collector's Office in Georgetown, waiting their turn to get to the wharves to discharge their cargoes.²¹⁷

At the same time the tremendous increase in the number of boats arriving at Georgetown brought to a head another problem that had plagued the canal company. Private wharf owners, allowed to operate unregulated along the banks of the canal in Georgetown, were extracting exorbitant wharfage fees from canal boats. This practice represented a direct threat to the attempts by the company to regulate freight rates effectively.²¹⁸

Accordingly, the board determined to build a new outlet above Georgetown because it would reduce the congestion by discharging boats above the city while at the same time freeing

²¹¹ See Appendix

²¹² *Proceedings of the President and Board of Directors*, L, 365, 426–427; and *Report of the President for the Year 1871* (1871), C & O Co., 5.

²¹³ *Report for the Year 1871* (1871), 5 and *Proceedings of the President and Board of Directors*, M, 14.

²¹⁴ Hutton to Clarke, Mar. 31, 1871, Ltrs. Recd., C & O Co.

²¹⁵ *Forty-Second Annual Report* (1870), C & O Co., 35–36.

²¹⁶ Hayden to Clarke, June 14, 1871, Ltrs. Recd., C & O Co.

²¹⁷ *Proceedings of the Stockholders*, E, 187–188.

²¹⁸ *Cumberland Daily News*, Mar. 2, 1875, in Gorman Collection.

canal boats from the grip of private wharf owners. The outlet would give canal boats access to the Potomac, where they would be towed to any number of river points below Georgetown.²¹⁹

In response to the board's decision to build an outlet, H. H. Dodge, a local politician and president of the Potomac Lock and Dock Company, advised the directors that he would construct an outlet lock and lease it to the company for a sum sufficient to assure a fair return on his investment. Dodge's proposal was accepted by the board, and on May 10, 1872, a contract for the construction of the outlet was signed.²²⁰ When the board realized that an outlet lock capable of lowering canal boats between the waterway and the river would require more water than was often available on the Georgetown Level, they shifted their plans. Upon the recommendation of Chief Engineer Hutton, the directors ordered that instead of an outlet lock, an inclined plane similar to those on the Monkland Canal in Scotland and on the Morris Canal in New Jersey be constructed. The desired change was made in the contract with the Potomac Lock and Dock Company, and the construction of the incline was begun during the spring of 1875.²²¹

With the help of the canal improvements and despite periodic interruptions to the navigation, trade continued at a high level between 1872 and 1875. At first it fell off slightly from the record peak of 1871 because the suspension of operations in the Pennsylvania mines that year had created an unusual demand for Cumberland coal which could not be expected to continue when the mines reopened.²²² But the canal trade quickly recovered and in 1875 reached an all-time high. Company statistics show a decline to 973,805 tons in 1875.²²³ In the latter year, the canal achieved its highest monthly tonnage total in May when more than 121,000 tons of coal were shipped.²²⁴

During this period the board discovered a new source of business in the gas coal trade. As several large companies in western Pennsylvania indicated their interest in sending large shipments of this product to Washington via the Pittsburgh and Connellsburg Railroad and the canal, the board granted rebates to encourage the development of this new trade. In 1874 the drawback was 5 cents a ton for 50,000 tons or more, and in 1875 it was 5 cents a ton for 100,000 tons or more and 6 cents for 200,000 tons or more. The gas coal trade rose rapidly from an average of less than 3,000 tons in 1870–72 to nearly 16,000 tons in 1873 and to more than 65,000 tons in 1874. However, it declined almost as rapidly as it had developed, decreasing by some 40,000 tons alone in 1875, because of the excessive amount of sulfur in the West Virginia gas coal and the strict inspection standards in the District of Columbia. For the remainder of the decade an annual average of some 22,000 tons of Youghiogheny gas coal passed down the waterway.²²⁵

It is interesting to note that commerce flourished on the canal during the period from 1872 to 1875 despite a score of incidents that disrupted trade for brief periods. A shortage [of] coasting vessels in the spring of 1872 led to the piling up of coal on the Georgetown and Alexandria wharves and thus to a curtailment of the coal trade.²²⁶ A severe drought in the Potomac Valley during August, September and October followed by an early winter in 1872, which forced the

²¹⁹ Harold Skramstad, "The Georgetown Canal Incline" *Technology and Culture*, Chapt. X, Oct. 1969, 550–551.

²²⁰ *Proceedings of the Stockholders*, E, 187, 198–199, 215–222, and *Proceedings of the President and Board of Directors*, M, 19–24.

²²¹ Skramstad, *Georgetown Canal Incline*, 552 – 554, and Dodge to Gorman, June 29, 1876, William R. Hutton Papers, Museum of History and Technology, Smithsonian Institution.

²²² *Cumberland News*, July 1872, in Gorman Collection.

²²³ See Appendix.

²²⁴ Weber to Gorman, June 1, 1875, Ltrs. Recd., C & O Co.

²²⁵ *Proceedings of the President and Board of Directors*, M, 151–152, 206; Bartol to Gorman, April 3, 1878, Ltrs Recd., C & O Co.; *Forty-Fifth Annual Report* (1873), 16–17; *Forty-Seventh Annual Report* (1875), 9–10; and *Fiftieth Annual Report* (1878), C & O Co., 24.

²²⁶ *Forty-Fourth Annual Report* (1872), C & O Co., 9.

canal to close on December 1, hampered operations for the year.²²⁷ A fire in the Borden Mining Company shaft in the Cumberland coal fields in March, strikes by the Boatmen's Benevolent Society in Cumberland and by the western Maryland miners in March and April protesting a 5-cent per ton rate increase on coal as well as a reduction in boating charge and a decrease in the shipments of the Consolidation Coal Company which generally accounted for one-fourth of the canal coal trade hindered the progress of commerce in 1873.²²⁸

A late-summer drought at Cumberland followed by a flash flood in September 1873, which caused the greatest destruction to the canal from natural causes since 1852, suspended navigation for nearly one month.²²⁹ Also in November 1873 an epidemic stripped the boats of their crews for a brief period and was responsible for the loss of many canal mules.²³⁰ In March and April of 1874 heavy rains forced the swollen river to overflow the canal banks below Dams Nos. 4 and 5 and on the Monocacy Division.²³¹ Trainmen on the Cumberland and Pennsylvania Railroad went on strike in August 1874, briefly stopping that vital link in the transportation between the coal mines and the canal. At about the same time, the Boatmen's Benevolent Society, which had grown to an active membership of 324 and which controlled 374 boats, again struck, demanding \$1.35 a ton freight rates from Cumberland to Georgetown. Canal traffic was virtually stopped for one month before the company, fearing that the mining companies would turn their shipments over to the Baltimore & Ohio, employed police and strike-breakers to bring the boatmen to terms.²³² The commerce on the canal in 1875 was affected by the nationwide economic depression which had grown steadily worse since 1873, unsettled freight rates and heavy ice on the Potomac until March thus causing large amounts of coal to be piled up at Georgetown and Alexandria.²³³

Both the coal companies and the canal board undertook to encourage the increasing trade. The former added numerous new boats to the canal during the period, thus increasing the number of vessels plying the waterway to 539 with an average capacity of 112 tons by 1874.²³⁴ In 1878, sixteen steamers were operating on the canal realizing for the first time the great dream of the canal's founders.²³⁵

The canal company, as its part, helped to speed the flow of navigation by abolishing the sporadically enforced Sabbath Law prohibiting Sunday runs and adopting rules for the [movement] of traffic on the Georgetown Level and at the Paw Paw Tunnel.²³⁶ Amid reports of the continuing congestion at the Georgetown Tidelock, the directors tried to rush the construction of the inclined plane.²³⁷ When the financial stringency in the nation postponed even the commencement of this work, the board purchased a steam dredge for \$10,000 in 1873 and cleaned out the Rock Creek Basin, removing nearly 58,000 tons of sand and mud within two years.²³⁸ The additional

²²⁷ *Proceedings of the President and Board of Directors*, M, 53–54, 62, 68–69, and *Forty-Fifth Annual Report* (1873) 3

²²⁸ President, Boatmen's Benevolent Society to Gorman, Jan. 1, 1873, Ltrs. Recd., C & O Co.; *Williamsport Pilot*, Jan. 11, 1873, in Gorman Collection; *Forty-Fifth Annual Report* (1873), 3; and *Report of President to Board of Directors*, May 13, 1873, Ltrs. Recd., C & O Co.

²²⁹ *Proceedings of the President and Board of Directors*, M, 124, 127; and *Forty-Sixth Annual Report* (1874), p.11

²³⁰ *Williamsport Pilot*, Dec. 21, 1872, in Gorman Collection.

²³¹ *Report of President to Board of Directors*, March and April 1874, Ltrs. Recd., C & O Co.

²³² *Proceedings of the President and Board of Directors*, M, 173, 176–177, 180–185; and *Cumberland Times*, Jan. 23, 1875, in Gorman Collection.

²³³ *Forty-Seventh Annual Report* (1875), 19–21.

²³⁴ Record of Boat Registrations, 1851 – 74, C & O Co.

²³⁵ Register of Boats Employed on the Canal, January 1, 1878, C & O Co.

²³⁶ *Report for the Year 1870* (1870), 7–8 and *Proceedings of the President and Board of Directors*, M, 57, 106.

²³⁷ Morgan to Gorman, May 1, 1875, Ltrs. Recd., C & O Co.

²³⁸ *Proceedings of the President and Board of Directors*, M, 133, 163; *Forty-Sixth Annual Report* (1874), 12; and *Forty-Seventh Annual Report* (1875), 8.

room in the basin came none too soon for in July 1874 it was reported that because of a large breach on the Alexandria Canal 840 boats had been locked from the basin into the river in one month.²³⁹ Permission was granted to some of the Cumberland coal operators, such as the Baltimore and Borden Coal Company, the New Central Coal Company and the Georges Creek and Cumberland Coal Company, to enlarge and improve their basins and wharves in Georgetown to accommodate the growing coal trade.²⁴⁰ Arrangements were made with the Consolidation Coal Company for increased accommodations at its wharf in Cumberland.²⁴¹ To promote the continued expansion of trade in both agricultural produce and coal, the canal company sought to facilitate the construction of the Cumberland Valley Railroad, a short line which ultimately extended from Harrisburg, Pennsylvania to Winchester, Virginia crossing the canal at Powell's Bend just below Williamsport, and the Western Maryland Railroad, which was to connect Baltimore with the canal at Big Pool.²⁴² Over the winter of 1874–75, the company leased the Lynn-owned Potomac Wharf at Cumberland for a period of two years, thus putting it in a position to reduce the exorbitant wharf charges in that town.²⁴³

Mounting Profits

As trade increased, company income and profits also mounted. Receipts from tolls collected, Ascending and Descending, during the 1870 to 1875 period were as follows:

1870	\$342,644.40
1871	485,019.65
1872	459,654.59
1873	482,528.57
1874	500,416.24
1875 ²⁴⁴	458,534.66

The income rose accordingly from some \$109,000 in 1870 to a peak of over \$290,000 in 1874.²⁴⁵ The board applied the excess of revenues over current expenses to the task of restoration and improvement and to the payment of the back interest on the repair bonds of 1849 and the preferred construction bonds of 1844. Of the \$200,000 repair bonds, \$199,000 had been paid off with interest by 1873. By December 1875 the board had paid off 19 coupons, representing 9½ years interest, amounting to \$902,457.66.²⁴⁶ The financial condition and reputation of the canal rose perceptibly throughout the period.

Program Of Improvements Recommended As Answer To Railroad Competition

²³⁹ *Proceedings of the President and Board of Directors*, M, 173.

²⁴⁰ Hutton to Gorman, July 18, Aug. 19, 1876; Fletcher to Gorman, Feb. 5, 1875; and *Report of President*, to Board of Directors, Jun. 16, 1874, Ltrs. Recd., C & O Co.; *Proceedings of the President and Board of Directors*, M, 216–217; *Forty-Fourth Annual Report* (1872), 7–8; and *Forty-Seventh Annual Report* (1875), 3–4, 8–9.

²⁴¹ *Ibid.*, M, 160, 168–170.

²⁴² *Forty-Fifth Annual Report* (1873), 16–17; *Forty-Sixth Annual Report* (1874), 18; and *Proceedings of the President and Board of Directors*, M, 469–470.

²⁴³ *Forty-Seventh Annual Report* (1875), 19–21.

²⁴⁴ See Appendix

²⁴⁵ Sanderlin, *The Great National Project*, 309.

²⁴⁶ *Forty-Fifth Annual Report* (1873), 8, and *Forty-Eighth Annual Report* (1876), 10.

Despite the prosperity of the canal and the substantial improvements already made, President Arthur P. Gorman recommended in 1875 the continuation of the general program to modernize the canal as a carrier and establish more firmly its future as a transportation line. The Baltimore & Ohio was in the process of completing its third rail line between Baltimore and Cumberland, and it would soon be able to transport coal for less than 1 cent a ton per mile. This together with the superior facilities of the Port of Baltimore, as compared with those at Georgetown and Alexandria, for the purpose of transshipment to northern ports, would soon force the canal to make corresponding reductions in cost and improved facilities. Moreover, within the past four years, another competing line had been built to the Cumberland coal fields by the Pennsylvania Railroad Company. As the owner of the Pennsylvania canal system, the railroad was contemplating the enlargement of its waterways to within 80 miles of the Allegany County mines and the construction of a line to connect the coal fields with their canal system. When this transportation line would be completed, much of the coal trade of the canal and Baltimore & Ohio would be diverted from Maryland to Philadelphia and New York.²⁴⁷

To enable the Chesapeake and Ohio to [meet] this challenge by the railroads, Gorman proposed that four necessary improvements be made to the canal. They were: (1) the restoration of the prism so that the average tonnage of the boats could be increased to 120 tons; (2) the control of the amount of terminal charges by the canal company; (3) the procurement of such control as to enable the canal company to fix and maintain a uniform rate of freight charges and (4) the enlargement of the locks so as to increase the capacity of double boats to 250 tons.²⁴⁸

Competition with the Baltimore & Ohio Railroad for the Canal Trade

The insistence on continued efforts to improve the canal's position as a transportation line was not premature, even in the peak year of 1875. The threat of a rate war among the competing coal carriers was always present although there had been none for some years. Since 1870, new markets for the Cumberland coal had opened in South America, the West Indies, and the trans-Atlantic trade, thus allowing each of the coal carriers to expand their tonnage without overt competitive tactics. Between 1870 and 1872 the total output of the Cumberland mines had grown from 1,717,075 tons to 2,355,471 tons, an increase abetted by the high price of English coal and the widespread recognition that the Maryland soft coal was superior to other kinds for the generation of steam.²⁴⁹ Accordingly, the coal tonnage on the canal had risen at an irregular pace from 604,137 tons in 1870 to 850,339 tons in 1871 and to 816,103 tons in 1872.²⁵⁰ Canal officials were pleased with the promise of a growing coal trade, and their optimism for the future growth of the trade was shown by their decision in February 1873 to increase the rate on coal some 5 cents to a total of 51 cents per ton from Cumberland to Georgetown in order to finance the program of canal improvements. Thus, the cost of transporting a ton of coal over the entire length of the canal was \$2.18½ (including tolls, 51 cents; wharfage at Cumberland, 5 cents; freight charges, \$1.35; wharfage at Georgetown, 25 cents; commission, 2½ cents). This compared favorably with the sum of \$2.73, which it cost to transport a ton of coal over the Baltimore & Ohio Railroad from Cumberland to Baltimore.²⁵¹ As a result of the nationwide depression, the total amount of the Cumberland coal trade and the volume of coal shipped via the Baltimore & Ohio and the Penn-

²⁴⁷ *Forty-Seventh Annual Report* (1875), 14-15.

²⁴⁸ *Ibid.*, 16-17.

²⁴⁹ *Forty-Fifth Annual Report* (1873), 16-17.

²⁵⁰ See Appendix H; *Williamsport Pilot*, Dec. 21, 1872, and *Cumberland News*, Oct. 18, 1872, in Gorman Collection; and *Proceedings of the President and Board of Directors*, L, 391.

²⁵¹ *Cumberland Times*, May 31, 1873, in Gorman Collection, and *Forty-Fifth Annual Report* (1873), 25-26.

sylvania Railroads fell off as early as 1874. However, the canal's trade continued to improve as the following statistics indicate:

	C&O Co.	B&O RR	Pa. RR Co.	TOTAL
1870	604,137	1,112,938	-----	1,717,075
1871	850,339	1,494,814	-----	2,345,153
1872	816,103	1,517,347	22,021	2,355,471
1873	778,802	1,780,710	114,589	2,674,101
1874	767,064	1,576,160	67,671	2,410,895
1875	879,838	1,302,237	160,698	2,342,773 ²⁵²

To compensate for its losses and to regain its share of the coal trade [lost to the] canal since 1850, the Baltimore & Ohio triggered a rate war by reducing its charges on coal to \$2.45 per ton early in 1875.²⁵³ Although this still left the canal with a slight advantage, of 3½ cents per ton to tidewater, the fact that coal shipped by railroad sold for between 15 and 20 cents more per ton than that transported by water, together with the greater efficiency of the railroad, made it mandatory for the board to lower its rates. Accordingly, the directors on January 13, 1875, ordered a general reduction of charges, including tolls, wharfage and freights in order to maintain its position in the trade. Over-all charges were reduced 22 cents: tolls, 8 cents; freight, 10 cents; and wharfage, 4 cents. Rebates of 5 to 10 cents per ton were also made available to large shippers.²⁵⁴ The board was put under pressure to lower the rates still further by up to 10 cents per ton by three citizen's groups in Cumberland, Hancock and Sharpsburg but the requests were turned down.²⁵⁵ As a result of the cutbacks, coal tonnage on the waterway increased greatly in 1875 to 879,838 tons from 778,802 tons in 1873 and 767,064 tons in 1874, but the canal revenues from tolls declined from \$500,416.24 in the peak year of 1874 to \$458,534.66 in 1875.²⁵⁶

Total Tonnage and Toll Revenues

The total tonnage and toll revenues for the 1870–75 period were:

	TONNAGE	TOLLS
1870	661,772	\$342,644.40
1871	968,827	485,019.65
1872	923,581	459,654.59
1873	845,248	482,528.57
1874	909,959	500,416.24
1875 ²⁵⁷	973,805	458,534.66

²⁵² See Appendix H, and *Proceedings of the President and Board of Directors*, M, 210–202.

²⁵³ *Cumberland Daily Times*, March 20, 1875, in Gorman Collection.

²⁵⁴ *Proceedings of the President and Board of Directors*, M, 210–211; *Forty-Seventh Annual Report* (1875), 19–21; and *Cumberland Times*, Mar. 1873, in Gorman Collection. Coal shipped by railroad sold at a better price, because it tended to be less broken than that shipped by canal.

²⁵⁵ Petitions to the President and Directors of the Chesapeake & Ohio Canal Company, March 3, 1875, Ltrs. Recd., C & O Co.

²⁵⁶ See Appendices E and G.

²⁵⁷ See Appendix G.

Ascending and Descending Trade

A breakdown of the total tonnage into the two categories of ascending and descending trade reveals that the amount of articles transported up the canal during the 1870–75 period comprised between some 1–2 percent of the total canal trade. Accordingly, the tonnage moving down the waterway amounted to some 98–99 percent of the aggregate commerce on the canal. The following list illustrates this point:

	ASCENDING	DESCENDING	TOTAL
1870	12,719	649,053	661,772
1871	18,552	950,275	968,827
1872	20,060	903,521	923,581
1873	16,271	828,977	845,248
1874	13,978	895,981	909,959
1875	10,338	963,467	973,805 ²⁵⁸

Principal Articles of Ascending and Descending Trade

An examination of the principal articles in the ascending and descending trade of the 1870–75 period provides some insight into the cargos that were passing over the waterway during its peak years. The chief items in the ascending trade throughout the period were hay, salt, lumber, ore, plaster, manures and sand. The most important of these articles was ore, which made up nearly 47 percent of the ascending trade of the 6-year period. The primary products of the descending trade were flour, wheat, corn, lumber, pig and scrap iron, bricks, rough stone, lime cement, coal, wood and limestone. The most important of these articles was coal, which comprised between some 89 and 96 percent of the annual descending trade and between some 87 and 92 percent of the yearly total tonnage. The following list illustrates these facts:

ASCENDING TRADE ²⁵⁹								
	HAY	SALT	LUMBER	ORE	PLASTER	MANURES	SAND	TOTAL
1870	4	1,296	933	5,801	879	913	867	12,719
1871	45	2,043	1,929	8,960	943	1,780	672	18,552
1872	1,418	1,014	1,028	11,090	379	1,482	1,484	20,060
1873	690	1,906	1,147	8,458	1,610	418	414	16,271
1874	235	1,157	627	6,380	1,883	1,552	694	13,978
1875	77	1,194	443	2,560	2,075	1,633	295	5,443

²⁵⁸ See Appendices B and C.

²⁵⁹ See Appendix B.

DESCENDING TRADE²⁶⁰

	FLOUR	WHEAT	CORN	LUMBER	PIG, SCRAP IRON	BRICKS
1870	1,845	11,710	2,929	968	1,833	4,073
1871	2,025	14,369	5,005	2,410	4,247	23,840
1872	980	8,416	3,844	1,761	3,730	12,308
1873	1,744	8,569	3,285	1,582	1,874	4,086
1874	1,526	9,780	5,312	1,102	3,053	1,303
1875	1,000	8,894	3,553	1,270	669	2,456

DESCENDING TRADE CONTINUED

	ROUGH STONE	LIME	COAL	WOOD	LIME STONE	TOTAL
1870	4,133	608	696,707	2,289	10,451	649,053
1871	15,177	9,473	848,199	3,635	14,145	950,275
1872	31,243	4,970	814,335	2,499	12,916	903,521
1873	15,994	4,700	796,717	4,336	12,868	828,977
1874	12,146	5,602	836,996	1,349	13,666	895,981
1875	11,462	7,596	904,898	1,077	14,559	933,533

F. THE DECLINING YEARS OF CANAL TRADE, 1876–1889

Factors Influencing the Development of Canal Trade

In 1876 the great nationwide depression, which had affected many parts of the country since the Panic of 1873, finally reached the canal. Trade fell off sharply to 709,130 tons (of which the coal trade consisted of 654,409 tons), and the revenue from tolls plummeted to \$290,274.39. That part of the trade which was retained was kept only by lowering the rates of tolls and wharfage from 51 cents to 46 cents per ton from Cumberland to Georgetown in April as a direct response to the Baltimore & Ohio's reduction of its charges from \$2.30 per ton to \$2.02 per ton to Baltimore.²⁶¹ In addition to this reduction, the board adopted a system of drawbacks on published rates for coal companies shipping large quantities of coal via the canal, and rebates were quickly granted to the Consolidation Coal Company and the Maryland Mining Company.²⁶² Gorman succinctly identified the causes of the downturn in company affairs when he noted in June 1876:

The continued depression in all branches of industry has so lessened the demand for coal as to seriously affect our business. The depression has also induced the shippers of coal from other regions and transportation lines leading to tidewater, to reduce the price of coal at commercial centers, so that (a) large reduction in prices was necessary in Cumberland coal.²⁶³

In an effort to compete with other carriers for the declining trade, the board authorized the president to reduce tolls on all commodities at competing points on the canal to whatever rates were

²⁶⁰ See Appendix C.

²⁶¹ *Proceedings of the President and Board of Directors*, M, 255; *Forty-Eighth Annual Report* (1876), C & O Co., 10; *Cumberland Civilian*, Apr. 29, 1877, in Gorman Collection.

²⁶² *Proceedings of the President and Board of Directors*, M, 246.

²⁶³ *Forty-Eighth Annual Report* (1876), C & O Co., 10.

necessary to retain the trade. As the Baltimore & Ohio had reduced its charges on flour by 4 cents a bushel from Harpers Ferry to Baltimore, President Gorman lowered the toll on flour from 1 cent to $\frac{1}{4}$ cent a ton per mile from all competing points between Williamsport and Weverton.²⁶⁴ In an attempt to reduce the cost of canal coal and to stimulate trade, Gorman secured the passage of a law by the Maryland General Assembly to compel the Cumberland and Pennsylvania Railroad, which carried most of the coal from western Maryland mines to the canal at Cumberland, to reduce its charges from 3 cents to 2 cents a ton per mile.²⁶⁵ The railroad resisted the move, however, and the reduction did not take effect until the Maryland Court of Appeals upheld the validity of the law in May 1877.²⁶⁶ The board directed surveys to be made up the north branch of the Potomac in December 1876 with the view of establishing a direct connection between the canal basin at Cumberland and the coal fields either by extending the canal to the mouth of the Savage River or construction a new rail line to the vicinity around George's Creek, the Savage River and Laurel Run.²⁶⁷

Despite all efforts to stimulate trade, reduce charges and provide direct connections with the mines, the coal trade, as well as the total trade, on the waterway continued to drop as the production of the Cumberland region declined markedly. This dismal state of affairs was summarized in the June 1877 annual report to the stockholders:

The business from the Maryland coal region during the year (1876) has proved one of the most unsatisfactory in its history. The decrease in the number of tons of coal shipped from this region to tidewater amounts to 507,692 tons, equal to a decrease of twenty-one (21) percent, as compared with 1875.²⁶⁸

The decrease in trade and the reduction [in] tolls caused canal revenues from that source to fall some \$268,000 from the 1875 level to \$290,274.39. Company profits also fell some \$149,000 from the 1875 figures to \$67,144.40.²⁶⁹ Most of the canal improvements, which had been projected or were in progress, were suspended. The company, however, did lease for 25 years at a cost of \$15,000 a year the Georgetown Incline Plane, which was finally completed in June 1876.²⁷⁰ Ironically, by the time the incline was put into operation, the decline of commerce had relieved the canal of the immediate need for it. The directors authorized the payment of only one coupon (that for July 1864) on the construction bonds in 1876.²⁷¹

1877

Trade on the canal faced even more critical challenges in 1877 as the nation remained in the grip of the depression and a rate war among the transportation lines was in the offing. The Baltimore & Ohio reduced its charges 22 cents below the published rate of \$2.03 for 1876. Canal officials

²⁶⁴ *Proceedings of the President and Board of Directors*, M, 255, 258, and Cockrell and Engle to Gorman, Jan. 26, and Mar. 9, 1877, Ltrs. Recd., C & O Co.

²⁶⁵ Sanderlin, *The Great National Project*, 239.

²⁶⁶ *Forty-Ninth Annual Report* (1877), C & O Co., p.3, and *Proceedings of the President and Board of Directors*, M, 296.

²⁶⁷ *Proceedings of the President and Board of Directors*, M, 283, and Hamill, Bannon and Farrands to Gorman, Jan. 9, 1877, Ltrs. Recd., C & O Co. The committee that carried out the study recommended the construction of a direct rail line connection.

²⁶⁸ *Forty-Ninth Annual Report* (1877), 3.

²⁶⁹ *Ibid.*, 4.

²⁷⁰ *Ibid.*, 9.

²⁷¹ *Proceedings of the President and Board of Directors*, M, 281. This coupon was the last ever paid.

were informed that the railroad had offered rebates of 18 to 20 cents in 1876.²⁷² The desperate situation of the canal was graphically described in November of that year by a holder of some canal construction bonds living in Philadelphia. In a letter to the company, he observed:

From what I see in the Cumberland papers I should judge that the canal will before long be available only as a nice swimming place for ducks and geese, & possibly a source of motive power to grist mills. It would seem that the Balt. & Ohio R.R. is going to gobble up all your business...²⁷³

The distressing news came to them in the spring of 1877 when officials of the American Coal, Maryland Coal and the Borden Mining Companies informed them that the railroad was offering similar private drawbacks of up to 20 cents per ton to those who were willing to guarantee a shipment of 35,000 tons for the year.²⁷⁴ Although the Cumberland and Pennsylvania Railroad finally reduced its charges to 2 cents a ton per mile, the competition of the Baltimore & Ohio Railroad interests and the Pennsylvania Clearfield anthracite coal was so great that the canal board decided on April 10 that it would be impossible to make any profit on the coal trade that year, and that the important thing was to hold the trade which the waterway already had.²⁷⁵ Thereupon the board, charging that the railroad had violated its earlier agreement with the canal to provide for uniform and moderate rates, plunged into the thick of the rate war.²⁷⁶ It reduced tolls twice in the course of the year from 41 cents per ton to 33 cents on April 10 and to 22 cents on August 21.²⁷⁷

The troubles of the canal in 1877 were complicated by a boatmen's strike from June 21 to August 20. Trade came to a virtual standstill during this period as the striking boatmen hindered traffic all along the line and tied up their barges on the first level west of Seneca to await some redress from their grievances. By the time that the strike ended, many of the canal shippers had made other arrangements with the railroad for the transportation of their business for the rest of the year.²⁷⁸

The last of the series of misfortunes, which befell the canal in 1877, occurred on November 24 when the worst flood in 150 years of the recorded history of the region swept down the Potomac Valley. The canal was left almost a total wreck and trade was brought to an end for the season. In all there had been only 161 days of navigation during the year, and the total trade on the waterway had fallen to 627,913 tons (of which 603,096 tons was coal) and the toll revenues to \$187,756.66.²⁷⁹ Despite the decline in trade on the canal, the board took some pride in the fact that the waterway carried only 102,707 tons of coal less than did the Baltimore & Ohio. Statistical charts relative to the coal company shipments and the destination of the coal cargoes may be seen on the following tables:

²⁷² *Proceedings of the President and Board of Directors*, M, 293–294.

²⁷³ Harris to Fawcett, Nov. 23, 1876, Ltrs. Recd., C & O Co.

²⁷⁴ Borden to Gorman, Mar. 26, 1877; Lloyd to Gorman, Mar. 28, 1877; and Loveridge to Gorman, Apr. 7, 1877, Ltrs. Recd., C & O Co.

²⁷⁵ *Proceedings of the President and Board of Directors*, M, 293–296.

²⁷⁶ Gorman to Garrett, Mar. 31, 1877, in *Ibid*, M, 295–296. An excellent summary of the canal – railroad rate war may be found in the *New York Herald*, Apr. 6, 1877, and the *New York Times*, Apr. 20, 1877.

²⁷⁷ *Ibid*, N, 4; *Fiftieth Annual Report* (1878), C & O Co., 6; and Gorman to Garrett, Apr. 10, 1877, Ltrs. Sent, in Gorman Collection.

²⁷⁸ Stanhope to Gorman, July 1, 1877, Ltrs. Recd., C & O Co., and *Fiftieth Annual Report* (1878), 3, 6.

²⁷⁹ *Fiftieth Annual Report* (1878), 3–4, 9–10.

POINTS TO WHICH COAL WAS SHIPPED - 1877	
	TONNAGE
Georgetown	563,907.04
Williamsport	36,272.06
Hancock	881.03
Harpers Ferry	764.16
Shepherdstown	515.10
Berlin (Brunswick)	326.08
Knoxville	117.01
Mercerville	112.09
Sharpsburg	103.16
Seneca	73.02
Two Locks	22.19
Total ²⁸⁰	603,096.14

CUMBERLAND COAL TRADE — 1877					
Company	To B&O Railroad	To C&O Canal	To Pa. Railroad	Local	Total
Consolidation Coal Co.	201,390	125,633	352	21,010	348,385
New Central Coal Co.	64,688	128,055	152,312	983	346,038
Georges Creek Coal & Iron Co.	120,683			870	121,553
Maryland Coal Co.	18,350	101,193		1,000	120,543
American Coal Co.	24,816	92,043	25	550	117,434
Borden Mining & Coal Co.	5,986	71,526	18,052	2,343	97,907
Atlantic & Georges Coal Co.	92,736			3,475	96,211
Hampshire & Baltimore Coal Co.	55,360	34,966		1,190	91,516
Potomac Coal Co.	63,399			260	63,659
Canton Coal Co.	48,812		60	224	49,096
Franklin Mines	45,220				45,220
Piedmont Coal & Iron Co.	35,123		83	500	35,706
Blaen Avon Mining Co.	560	31,580		1,629	33,769
Union Mining Co.	880			2,360	3,240
Georges Creek Mining Co.	1,725				1,725
Canton Mine	1,212				1,212
Georges Creek Valley Mine	1,122				1,122
TOTALS ²⁸¹	782,065	584,996	170,884	36,394	1,574,339

When the canal reopened for trade on April 15, 1878 prospects for a recovery appeared to be slight. Business remained generally depressed, and coal prices continued their deflationary tendency. The price of a ton of coal on board vessels at Georgetown, which had been \$4.65 in 1872, fell to \$2.60 in 1878. The tolls, which had amounted to 12 percent of the value of coal transported on the canal in 1872, totaled 15½ percent of its value by early 1879, thus preventing canal officials from raising rates.²⁸² Under these conditions trade remained slow, and revenues had little opportunity to rise. In an effort to end the ruinous rate war, the canal company enlisted the assistance of the Maryland General Assembly to bring the Baltimore & Ohio to accept a compromise. The legislature came to the aid of the canal as hostility toward the railroad had been growing in

²⁸⁰ *Fiftieth Annual Report* (1878), 24.

²⁸¹ *Fiftieth Annual Report* (1878)

²⁸² *Fifty-Second Annual Report* (1880), 6–7.

the state since the local elections in 1875 during which the railroad had cast off its allegiance to the Democratic Party, dominated by Gorman.²⁸³ In 1878 it passed an act curbing the competitive practices of the Baltimore & Ohio Railroad.²⁸⁴ On the strength of this act the two companies reached a toll rate agreement whereby the railroad lowered its rates west of Cumberland and promised not to increase its charges east of that town while the canal raised its tolls on coal from 22 cents to 40 cents a ton from Cumberland to Georgetown.²⁸⁵ As a result of this agreement and an increase of some 105,000 tons in the total coal production of the western Maryland mines, trade on the canal increased slightly to 662,508 tons (of which 630,290 tons were coal) and toll revenues increased greatly to \$282,181.18.²⁸⁶

Attempts to Improve Canal as Coal Carrier

Meanwhile the company turned to other means of improving its position as a carrier. At least four courses of action were possible: (1) to secure an independent connection with the coal fields; (2) to gain control of freight rates on the canal; (3) to reduce operating expenses; and (4) to make further agreements with its competitors. All four ways were tried during 1879 and 1880.

The object of securing an independent connection with the coal fields was to reduce the cost of transportation for the coal companies and to [rid] the canal of its dependence on the Baltimore & Ohio and its subsidiaries. The company made arrangements with the owners of the Davis mine in West Virginia in 1879 for the transportation of coal from that mine.²⁸⁷ It sought to facilitate the construction of two independent railroad connections with the canal at Cumberland by invoking the agreement of 1881 to compel the Baltimore & Ohio to permit the railroads to cross its tracks. Among these were the Georges Creek and Cumberland Railroad, which proposed to build a line all the way down the Potomac to the coal basin, and the Pennsylvania Railroad. Two other roads, the West Virginia Central and Pittsburgh and the Potomac and Piedmont, agreed to build short feeder lines to the Baltimore & Ohio tracks on the promise of special rates from the canal for coal shipped over it.²⁸⁸

The purpose of gaining control of freight rates on the canal was to reduce the profits of the various agencies involved in canal transportation so as to [help] the company to reduce overall charges while maintaining a profitable rate of tolls. In this regard, the company achieved success in an assault on the owners of the wharves at Cumberland and Georgetown. The wharf owners, who had invested some \$300,000 in their facilities, received handsome annual returns, which had reached a peak of \$344,000 in 1874.²⁸⁹ At the same time, their charges were so high that they forced the canal board to reduce its rates on the coal trade in order to compete with the railroads for business. The low rate of tolls, on the other hand, did not produce enough revenue to pay anything on the great investment of capital in the company. The board dredged to Rock Creek Basin and made improvements to the tidelock and incline in order to make the river bank available for wharf facilities, thus seeking to force wharfage fees at Georgetown down to a fair level. At Cumberland, the company renewed its lease of the Potomac Wharf from the Consolidation Coal Company and cut rates until others were forced to reduce theirs.²⁹⁰ On January 1, 1879 it purchased the Basin Wharf, the largest such facility at Cumberland, from William Walsh and Thomas J.

²⁸³ *Frederick Examiner*, Feb. 27, and Mar. 3, 1878.

²⁸⁴ *Acts of the General Assembly of the State of Maryland* (Annapolis, 1878), Ch. 155.

²⁸⁵ *Fiftieth Annual Report* (1878), 11–12, and *Proceedings of the President and Board of Directors*, N, 20, 24.

²⁸⁶ *Fifty-First Annual Report* (1879), C & O Co., 5–6.

²⁸⁷ *Fifty-Second Annual Report* (1880), C & O Co., 12.

²⁸⁸ *Ibid.* 12–13, and *Proceedings of the President and Board of Directors*, N, 99–100, 102–103, 112

²⁸⁹ *Cumberland Daily News*, Mar. 2, 1875, and Anon. Report, h. d. in Gorman Collection.

²⁹⁰ Graham to Gorman, Jan. 5, and Feb. 28, 1877, and Hicks to Gorman, Apr. 20, 1877, Ltrs. Recd., C & O Co.

McKaig for \$100,000, and thereby secured a permanent control over wharfage at the western terminus of the canal.²⁹¹

The company attempted to reduce its own operating expenses by initiating cost-savings improvements that would permit a lower toll rate but which would still leave the canal a profit. One improvement completed and in operation by October 1879, was the installation of a 3-station telephone line, the longest single circuit in existence at the time, along the waterway so located as to be within easy reach of any point on the canal.²⁹² The telephone system provided for more effective communication both for canal employees as well as shippers and permitted the company to reduce its maintenance staff, thus providing for an annual savings of nearly \$12,000. Another proposed improvement was the lengthening of at least 27 locks by 10 feet each, but only 14 had been extended by 1882, thereby denying to the coal shippers the anticipated advantages of operating larger boats.²⁹³

The efforts of the canal company to come to terms with its competitors resulted in a compromise settlement with the Baltimore & Ohio and the Pennsylvania Railroad Companies in April 1880. It voluntarily cooperated with the two rail lines to fix charges on the coal trade at profitable levels. The arrangement attracted the attention of the West Virginia coal operators located west of Piedmont, thus opening up a new source for the canal trade. The contract enabled the board to raise canal tolls on coal to 51 cents per ton from Cumberland to Georgetown.²⁹⁴

Hindrances to Canal Trade

The attempts of the board to improve the position of the canal as a transportation line were hindered by many obstructions. A miner's strike from September 4 to October 8, 1879, followed by a serious drought, which limited the carrying capacity of the boats to 80 tons, caused an estimated loss of 100,000 tons of commerce that year.²⁹⁵ In 1880 there were several short strikes in the mines and coal feeder railways. An 8-week strike of boatmen led by those employed by the Borden Mining Company interfered with navigation from late June to late August, causing a drop in trade from an average of 21,374 tons to 13,--- tons a week.²⁹⁶ Hardly was the strike settled, than the river lock at Rock Creek Basin gave way and was abandoned.²⁹⁷ In the same year Daniel K. Stewart, a holder of some of the repair bonds of 1878 that had been issued to repair the flood damage to the canal, challenged the right of the company to sell the bonds to raise funds for lengthening the locks.²⁹⁸ After the company had won a doubtful victory in the Stewart case, Governor Hamilton, a political foe of President Gorman, expressed his doubts about the legality of using the bonds for that purpose, thereby ruining the market for the bonds and bringing the improvements to a halt.²⁹⁹ Meanwhile the Georges Creek and Cumberland Railroad was having trouble securing the necessary permission to cross the Baltimore & Ohio tracks to the canal basin, thus depriving the waterway of its much-needed independent connection with the mine fields as late as 1881.³⁰⁰ Another severe drought in August and September of the same year so reduced the water in the river and in the canal that boats having a 4½ foot draft, could be passed only in fleets

²⁹¹ *Fifty-First Annual Report* (1879), 10.

²⁹² *Proceedings of the President and Board of Directors*, N, 94-97, and *Fifty-Second Annual Report* (1880), 11.

²⁹³ *Proceedings of the Stockholders*, E, 353-355.

²⁹⁴ *Proceedings of the President and Board of Directors*, N, 101-102, and *Fifty-Second Annual Report* (1880), 12.

²⁹⁵ *Fifty-Second Annual Report* (1880), C & O Co., 6.

²⁹⁶ *Proceedings of the President and Board of Directors*, N, 117-118.

²⁹⁷ *Proceedings of the President and Board of Directors*, N, 119, and *Fifty-Third Annual Report* (1881), 8.

²⁹⁸ *Fifty-Second Annual Report* (1880), C & O Co., 10.

²⁹⁹ *Fifty-Fourth Annual Report* (1882), C & O Co., 21

³⁰⁰ *Proceedings of the President and Board of Directors*, N, 148-149, and *Fifty-Fourth Annual Report* (1882), 7.

every six or eight days by means of collecting the water at the upstream dams and then passing it through the canal along with the boats down to the lower levels.³⁰¹ Finally in 1882 another lengthy strike occurred among the coal miners lasting from April until August during which there was little trade on the canal. By the time the miners agreed to resume their work, there were only three months of active navigation remaining and many of the boatmen had left the canal and disposed of their crews and stock. The lack of trade also ended any hopes by the board to further the program of canal improvements and of lengthening the locks (14 of which had been completed).³⁰²

During the decade from 1879 to 1888, the canal went into a period of decline from which it never emerged. Under the continuing depressed state of trade, there was little the officials could do to put the waterway back on its feet, and it became scarcely possible to keep the canal in shape for navigation. The dilemma faced by the board was that the canal could not be maintained or improved unless additional funds were spent on it and these funds could not be raised unless the canal was improved so as to keep pace with the increasing facilities of the competing railroads.³⁰³ Thus, the last decade of its independent existence was one of trade stagnation, financial depression, physical deterioration, political interference and outside intrigue.

The business on the waterway by this time was almost totally dependent on the demand for coal. In view of the continued depression in industry, this demand remained relatively stagnant during the early years of the decade. The competition of the great railroad lines, which had reduced the cost of its services by making improvements in its equipment whereby one locomotive could haul three times the number of cars as before, also acted to keep the coal shipments on the canal at a minimum.³⁰⁴ In 1884 the canal's business was curtailed by the efforts of the leading Cumberland coal companies to force the board to lower its charges by arguing that such a course of action was needed because of the decline in popularity of Cumberland coal, the growing demand for anthracite, the greater handling and breakage of canal-shipped coal, the obsolescence of the port at Georgetown, and the dependence of the canal on the coal trade.³⁰⁵ The general paralysis of business, continuing freight wars between the railroads, and strikes in the coal fields led to the suspension of navigation for four of the first six months of 1885.³⁰⁶ A prolonged general strike by the miners beginning in March 1886 had a similar effect that year.³⁰⁷ Natural disasters continued to plague the canal as a heavy freshet struck Washington County in July 1884 and three floods in April and May 1886 virtually destroyed Dam No. 6.³⁰⁸

The Coal Trade: 1879–1888

The general stagnation of the canal's trade was clearly reflected in the annual canal tonnage and toll revenue figures from 1879 to 1888. The statistics are as follows:

³⁰¹ *Fifty-Fourth Annual Report* (1882), C & O Co. 15

³⁰² *Fifty-Fourth Annual Report* (1882), 9 and *Fifty-Fifth Annual Report* (1883) C & O Co. 7–8.

³⁰³ *Fifty-Eighth Annual Report* (1886), C & O Co. 5.

³⁰⁴ *Fifty-Eighth Annual Report* (1886), C & O Co. 6–7.

³⁰⁵ *Proceedings of the President and Board of Directors*, N, 260, and Borden to Gorman, Apr. 1, 1878, Loveridge to Gorman, Apr. 1, 1878, Loveridge to Gorman, Apr. 15, 1878 and Reppelier to Gorman, Apr. 19, 27, 1878, Ltrs. Recd., C & O Co.

³⁰⁶ *Fifty-Seventh Annual Report* (1885), C & O Co. 6–7

³⁰⁷ *Proceedings of the President and Board of Directors*, N, 328

³⁰⁸ *Ibid.*, N, 273, 329–331, and *Fifty-Ninth Annual Report* (1887), C & O Co. 5–6.

	COAL TONNAGE	TOLLS
1879	522,904	\$234,976.52
1880	615,423	361,757.68
1881	521,189	284,435.59
1882	316,648	143,730.76
1883	708,465	284,234.00
1884	378,352	135,693.59
1885	398,012	106,940.39
1886	295,415	81,718.73
1887	277,688	110,667.83
1888 ³⁰⁹	286,813	121,218.25

Canal revenues declined irregularly in the face of the bitter competition among the coal carriers. The directors lowered canal tolls from 51 cents in 1880 to 36 cents in June 1883, to 33 cents in April 1884, and finally to 22 cents in February 1885 in order to offset the reductions in charges by the railroads and to stimulate trade.³¹⁰ In 1885 the Baltimore & Ohio was carrying coal to deep water docks at Locust Point in Baltimore Harbor for \$1.30 a ton and frequently for as low as \$1.00 a ton whereas as late as 1865 it had charged \$5.58 a ton. This reduction in charges had been made possible by the use of steel tracks, heavy locomotives and enlarged cars. On the other hand, the capacity of the canal boats—112 tons—was the same as it had been in 1852 and the number of men and mules required to operate the boats was the same as it had been in 1852 and the number of men and mules required to operate the boats was the same as it had been since 1830.³¹¹

The decline in revenue made the financial position of the debt-ridden, outdated canal, very precarious. If the interest on the repair bonds went unpaid for more than two years, the bondholders could obtain a foreclosure according to the decision of the U. S. Circuit Court in 1886. On the other hand, if the canal's income were used to pay this interest, the company would not have the funds to make the improvements necessary to enable the waterway to compete with the low freight charges of the railroads and thereby to obtain the money to repay the loans.³¹²

To resolve this financial dilemma as well as it was able, the company resorted to several devices. First, it cut the ordinary expenses of operation by reducing salaries, discharging laborers and abolishing staff offices between 1882 and 1884.³¹³ Second, the company applied its economy measures to the work of maintenance and improvement, authorizing only the most essential repairs to the waterway and suspending work on the comprehensive program of improvements laid down by the Gorman administration in the early 1870s.³¹⁴

About the only hopeful sign in the otherwise bleak records of the 1880s was the completion of the Piedmont and Cumberland Railroad in 1886. An independent connection with the West Virginia coal fields had at last been realized, as this railroad had built its line down the Potomac Valley to the south of the Baltimore & Ohio. This course of action had been taken to circumvent the necessity of obtaining a permit from that road to cross its tracks to reach the Cumberland basin.³¹⁵ The ill-fated Cumberland and Georges Creek Railroad had been blocked this

³⁰⁹ See Appendix E and N. After 1878, the company only maintained tonnage statistics for the coal trade.

³¹⁰ *Proceedings of the President and Board of Directors*, N, 220, 251 and 308.

³¹¹ *Fifty-Eighth Annual Report* (1886), 9.

³¹² *Ibid.* 8-10.

³¹³ *Proceedings of the President and Board of Directors*, N, 189-190, 214, 246, 257-258, 267-268, 274 and 276.

³¹⁴ *Fifty-Seventh Annual Report* (1885), 5-6, 9-10.

³¹⁵ *Fifty-Ninth Annual Report* (1887), 11.

way for many years, and as late as April 1888, was still urging the canal company to compel the Baltimore & Ohio to permit the crossing it wished.³¹⁶ The Piedmont and Cumberland Railroad approached the basin from the other direction and easily gained the consent of the canal board to build its tracks across the waterway to a connection with the basin wharf.³¹⁷

The canal company received considerably less benefit from the completion of the two feeder lines to the Baltimore & Ohio, although their completion had been encouraged by the board's promise in 1880 to grant special rates for coal shipped over it from these lines. In 1882 the West Virginia Central and Pittsburgh Railroad was completed from a point near Bloomington on the Baltimore & Ohio trunk to Fairfax Stone at the Elk Garden coal fields some 13 miles distant. Soon 800 tons of coal were being shipped over this line per day, and it was expected by the canal board to become one of the largest carriers of the Cumberland coal.³¹⁸ At about the same time the Potomac and Piedmont Railroad completed its line from a point between Piedmont and Bloomington up the North Branch some 11 miles to the Big Vein at the Elk Garden coal fields.³¹⁹ Both these lines undoubtedly contributed to the increase of the canal trade to over 707,000 tons in 1883, but the freight wars, miners' strikes and general stagnation of business caused their contribution to the canal's coal trade to decline markedly after that.

One other bright spot in the otherwise bleak coal trade during the 1880s was the emergence of Williamsport as an important coal shipping point. The amount of coal shipped to that town increased sharply in 1883 from a previous annual average tonnage of 37,000 tons to nearly 63,000 tons. The two coal companies whose shipments accounted for much of this increase were the Consolidation Coal Company and the National Coal Company. In 1884 more than 76,000 tons of coal were shipped to that town. Despite the continuing decline in the overall coal trade on the canal, the amount transported to Williamsport remained at a high level, falling somewhat to 55,000 and 53,000 tons in 1885 and 1886 but then rising to more than 72,000 tons in 1888.³²⁰

The financial condition of the company improved somewhat in 1887 and 1888. Coal tonnage declined but slightly from 295,415 tons in 1886 to 277,688 tons in 1887 and 286,183 tons in 1888. On the strength of higher tolls, revenues from that source actually increased from \$81,718.73 in 1886 to \$110,667.83 in 1887 and \$121,218.27 in 1888.³²¹ For the first time the board made a distinction in toll charges between coal destined for the District cities market in which there would be less rivalry and that which was intended for transshipment to Eastern markets. The directors fixed the rate for the latter at 30 cents a ton from Cumberland to Georgetown while locally consumed coal paid 36 cents a ton in 1887 and 44 cents a ton in 1888.³²² This strategy to top the coastwise coal trade came to naught because of a great shortage of coasting vessels at Georgetown. The shippers at that port had been outmaneuvered by their counterparts at Philadelphia, Newport News and Norfolk in contracting for the available coasting ships. The canal directors estimated that this problem had deprived them of 100,000 tons of coal trade.³²³

Even had the canal been able to reach tonnage expectations, the tolls and the quantity of trade still would have been too low to produce revenues or profits on the scale of those in the prosperous early 1870s. The company continued to have insufficient funds for the ordinary expenses of operating the waterway and for the payment of interest on the repair bonds.³²⁴

³¹⁶ *Proceedings of the President and Board of Directors*, N, 376.

³¹⁷ *Ibid.*, N, 345–346.

³¹⁸ *Fifty-Fourth Annual Report* (1882), 9–10.

³¹⁹ *Ibid.*

³²⁰ *Fifty-Sixth Annual Report* (1884), 16–17 and Appendix L.

³²¹ See Appendix R.

³²² *Proceedings of the President and Board of Directors*, N, 360, 372.

³²³ *Sixty-First Annual Report* (1889), C & O Co., 7.

³²⁴ *Ibid.*, N, 392.

End of the Canal as an Independent Carrier

The year 1889 witnessed a series of problems that ended the independent existence of the canal. A large break in the limestone region above Shepherdstown on March 24 delayed navigation for ten days. This was followed on April 2 by a heavy rock slide at the deep cut near the lower end of Paw Paw Tunnel that suspended navigation of 16 days. As a result, only 55,887 tons of coal (producing \$20,500.34 in toll revenue) had been transported by May 30, when the highest flood in the history of the valley swept down the Potomac and left the canal a total wreck.³²⁵ Because of the extensive destruction to the waterway, navigation was suspended for more than two years.

³²⁵ *Sixty-Second Annual Report* (1890), in Receivership Papers, Washington County Courthouse, Hagerstown

III: COMMERCE ON THE CHESAPEAKE & OHIO CANAL: 1891–1924

A. RESUMPTION OF TRADE: 1891–1894

After the canal had been left idle in disrepair for more than a year after the titanic flood of 1889, an effort was made to ascertain if there was any reason to repair the waterway. As part of this program, the Cumberland coal companies were approached as to their interest in shipping coal on the canal if it was restored. In response, four companies indicated that they would ship a total of 450,000 tons of coal annually for a period of four years after the canal was reopened. The companies and their promised shipments were as follows:

Consolidation Coal Company	200,000
Georges Creek Coal & Iron Company	150,000
Barton & Georges Creek Valley Company	50,000
Big Vein Coal Company	50,000
	450,000

The promises were made on the condition that: (1) the tolls from Cumberland to Georgetown would not exceed 40 cents per ton with a rebate of 10 cents per ton for coal shipped in the coastwise trade; (2) the wharfage and shipping charges at Cumberland would not exceed 4 cents per ton; and (3) boat freight from Cumberland to Georgetown would not exceed 65 cents. If the railroads raised their rates, the canal would also be allowed to do so, but if the canal navigation was interrupted the coal companies would reduce their shipments proportionately. Some of the companies, which had formerly made heavy coal shipments on the canal, such as the West Virginia Central and Pittsburgh Railroad, refused to make any promises.³²⁶

When the canal was reopened for business on September 1891, commerce recovered quickly, but was unable to expand beyond the low averages of the 1880s. The prolonged suspension of navigation had caused many boatmen to leave the valley or turn to other occupations, and the port facilities at Georgetown had deteriorated. While the rate of tolls established for the coal trade was that which the Cumberland coal companies had urged in June 1890, the charges were not likely to divert much of the trade from the Baltimore & Ohio to the waterway. Moreover, the low toll charges did not attract enough business to meet expenses. Thus, the canal never operated at profitable levels after 1891.³²⁷

The coal tonnages on the waterway in the first three years after navigation resumed never reached the totals promised by the Cumberland coal companies in June 1890. The totals for this period were:

	COAL TONNAGE	TOLL REVENUES
1891	50,533.14	
1892	265,799.08	\$135,979.89
1893 ³²⁸	336,295.11	130,923.35

³²⁶ *Fourth Report of District Receivers*, June 25, 1890, Receivership Papers.

³²⁷ Report of Trustees, Jan. 30, 1894, in *Chesapeake & Ohio Canal Company vs. Western Maryland Railway Company*, Jan. 18, 1904, Maryland Court of Appeals, 109–112.

³²⁸ *Hagerstown Daily Herald and Torch Light*, June 21, 1894, Receivership Papers.

B. CORPORATE DEVICES TO OPERATE THE CANAL

To enable the canal to show a profit as a court order had required, the railroad company resorted to a shadow corporation in January 1894 for the operation of the waterway. The trustees organized the Chesapeake & Ohio Transportation Company as a corporation under the Maryland laws. In return for the latter's guarantee to keep the canal in navigable condition, the transportation company agreed to provide the necessary boats to carry the trade offered and guaranteed an annual profit of \$100,000. The trustees retained the right to let similar contracts to other companies if the need arose.³²⁹

In 1902 the receivers and the Consolidation Coal Company took another step towards the improvement of service and the efficiency of navigation by organizing the Canal Towage Company. The primary function of this enterprise was to provide economy and regularity to the operation of the waterway. To accomplish this the company supplied the boats, teams and equipment and established a regular schedule of runs. It also cut the freight rates and controlled the distribution of cargoes. For all practical purposes, this concern drove the last remaining independent boatmen off the canal since they could not compete with the company and its sponsors.³³⁰ A comparison of receipts and expenses of independent boatmen before the organization of the Canal Towage Company and the boats operated by that company clearly demonstrates the relative disadvantage of the independent boatmen. A copy of this balance sheet follows:

TOTAL COAL TONNAGES & TOLL REVENUES COLLECTED: 1894–1924 ³³¹			
BALANCE SHEET (PER TRIP)			
INDEPENDENT BOATMEN		CANAL TOWAGE COMPANY	
<u>Receipts</u>		<u>Receipts</u>	
90 tons @ 65¢ a ton	= \$58.50	90 tons @ 45¢ a ton	= \$40.50
<u>Expenses</u>		<u>Expenses</u>	
Boat Rent	\$15.00	Way Bills	\$4.80
Mule Hire	16.00	Feed	5.00
Way Bills	4.80		\$9.80
Feed	5.00		
	\$40.80		
Profit	\$17.70	Profit	\$30.70

There are few statistics relative to the progress of canal trade from 1894 to 1924. The available figures show the steady decline of the waterway as a coal carrier and transportation agency. The coal tonnage and toll revenues for this period are:

	COAL TONNAGE	TOLLS
1894	Unavailable	\$117,622.29
1895	Unavailable	116,728.40
1896–1905	Unavailable	Unavailable
1906	Unavailable	59,840.01
1907	(approx.) 203,000	64,425.92

³²⁹ Report of Trustees, Apr. 6, 1901, in *Chesapeake & Ohio Canal Company vs. Western Maryland Railway Company*, 114–116, 129.

³³⁰ Sanderlin, *The Great National Project*, 269–270, and Washington *Evening Star*, July 11, 1905.

³³¹ Sanderlin, *The Great National Project*, 270.

1908	(approx.) 190,000	62,094.16
1909	183,694	59,105.66
1910	170,444	52,965.37
1911	166,463	43,924.73
1912	172,556	41,644.24
1913	176,491	41,407.71
1914	171,062	42,236.97
1915	173,997	41,271.46
1916	158,036	38,956.77
1917	151,667	40,545.74
1918	138,087	71,404.43
1919	133,529	47,346.95
1920	127,871	62,102.38
1921	66,477	42,017.33
1922	Unavailable	3,435.18
1923	56,404	31,899.32
1924 ³³²	Unavailable	1,215.60

C. EVALUATION OF CANAL TRADE: 1891-1924

The chief articles in the canal trade during the receivership period were coal and West Virginia limestone. Lesser amounts of wood, bark, lumber, pulpwood, railroad ties, sand and flour were transported on the waterway.³³³ Of these commodities, the most important was coal, which accounted for almost the entire business on the waterway. In fact there apparently were no statistics kept for the trade other than those for coal. Most of the coal mined during this period came from the Georges Creek region near Frostburg between Piedmont and Cumberland.³³⁴ The Consolidation Coal Company, owned by the Baltimore & Ohio, supplied over 99 percent of the business. The former transported the coal from its mines to its own wharf at the canal basin in Cumberland over the Cumberland and Pennsylvania Railroad, also owned by the Baltimore & Ohio. It shipped the coal down the canal in its own fleet of boats, operated by the Canal Towage Company. Thus, in effect, the trade on the waterway in the receivership period was limited primarily to that supplied by the Baltimore & Ohio interests for consumption in the local market.

During World War I the canal carried coal for the government proving grounds at Indian Head, Maryland, some 30 miles down the Potomac from Washington. The canal was nationalized on January 1, 1918, and placed under the Inland Waterways Commission, which operated the railroads and the coastwise and intercoastal shipping during the war emergency. The commission entered into an agreement with the Canal Towage Company to increase the delivery of coal to the boats and to facilitate the unloading of the coal at Washington and at government stations along the Potomac River. For the first time tugs regularly hauled canal boats with their coal cargoes up and down the river below tidewater. It is interesting to note that the war brought a revival of

³³² See Appendix

³³³ Chesapeake & Ohio Canal Company Papers, 1891-1923, Duke University Library, Durham, North Carolina. Also see, Waybills (Manifests of Whole Cargo) Issued at Georgetown, 1893-1919, and Daily Reports of Boats and Cargos Arriving and Clearing and Daily Exhibits of Business Transacted, May-July and September, 1923, Chesapeake & Ohio Canal Company Records, Record Group 79, National Archives.

³³⁴ Interview of George L. Nicholson, January 25, 1939, Misc. NPS MSS.

many of the same problems that had plagued canal trade during the Civil War—strikes, increasing wages for the boatmen and lock tenders, and draft-related manpower shortages.³³⁵

At no time during the receivership period did the amount of trade on the canal justify the continued operation of the waterway. In fact, the commerce continued to decline despite the growth of the Washington metropolitan area and the demands of the world war. Among the most important reasons for this decline were:

1. Lack of aggressive leadership.
2. Obsolescence of the waterway as a transportation line, of Georgetown as a port, and of the Potomac River as a channel for competitive trade.
3. Irregularity of navigation.
4. Competition of the Baltimore & Ohio Railroad.
5. Interference of navigation by the freshets of 1897, 1902, 1907 and 1914, and by occasional breaches, particularly in the lime sinks of the upper valley.³³⁶

The steady decline in the canal trade during the receivership period was also a reflection of the fact that the Cumberland coal region, which had often been described as inexhaustible, was almost worked out. The production of the Maryland coal reached a peak in 1907 with 5,532,628 tons, but after that the trend went downward to 4,065,239 tons in 1920 and 3,078,353 tons in 1926. Along with the reduction in coal production went a disastrous decline in the price of the coal and hence its overall value. In 1920 coal sold for \$4.63 per ton at the mines, thereby making the net value of the Maryland coal \$18,822,057, whereas six years later the price had decreased to \$2.21 per ton, thus reducing the value of the entire Maryland coal production to \$6,800,000. The miners' strike of 1922, which was a response to the steady trend downward of employment in the western Maryland mines from the peak year in 1912 when some 6,162 had worked there, was further evidence of the declining productivity of the mines. The strike itself was a virtual death-blow to the coal fields and the canal alike.³³⁷

D. POSSIBILITY OF TRADE AFTER 1924

The flood in the spring of 1924 provided the opportunity for the railroad to relieve itself of the expense of operating the canal. The receivers made little effort to restore the canal beyond the Georgetown Level. They authorized only enough repairs to protect what was left of the wrecked waterway and to enable them to assert that the canal could quickly be put into navigable condition if sufficient business was presented to warrant the effort. The canal was left a wreck, but technically arousing concern in which the water rents received from the Georgetown mills paid the expenses of a skeleton operating staff. For a brief period in 1928-29 the trustees considered opening the canal between Cumberland and Williamsport, and in the latter year even had studies made of the cost of such a resumption and of the amount of coal that would be needed to be shipped to justify the necessary expenditures for restoration. However, negotiations with the Cumberland coal companies

³³⁵ Washington *Evening Star*, September 26, 1918.

³³⁶ Sanderlin, *The Great National Project*, 272.

³³⁷ Bureau of Business and Economic Research, University of Maryland, *Coal in the Maryland Economy: 1736-1965* (College Park, 1953), 2-5.

proved futile, and efforts to resume navigation on the canal ceased with the onset of the Great Depression.³³⁸

³³⁸ Report of Trustees, 1922, 1923 and 1924; 1925 and 1926; 1927; 1928; 1930 and 1931, in Receivership Papers.

APPENDIX A

ASCENDING AND DESCENDING TRADE: 1831–1850

1831

ASCENDING			
ARTICLE	UNIT	TOTAL	
Fish	Barrels	183	
Salt	Barrels	901	
Plaster	Tons	51½	
Sundries	Variety of articles		
DESCENDING			
Tobacco	Hogsheads	30	
Wheat	Bushels	4,745	
Flour	Barrels	71,172	
Bran, Shorts, etc.	Bushels	10,003	
Rye and Chop	Bushels	446	
Corn	Bushels	2,145	
Corn Meal	Bushels	300	
Flax and Seed	Bushels	0	
Oil	Barrels	1	
Hemp, Flax	Pounds	5,240	
Whiskey	Barrels	1,472	
Hogs	Pounds	5,000	
Bacon	Pounds	1,700	
Lard and Butter	Pounds	2,460	
Leather	Pounds	7,790	
Cement	Barrels	6	
Stone	Perches	32	
Coal	Bushels	906	
Iron-Pig, Bar & Castings	Tons	74	
Wood	Cord	0	
Sundries	6,000 stand of arms ¹		

1832

(Statistics available only for February 12 to May 31)

ASCENDING			
ARTICLE	UNIT	TOTAL	
Fish	Barrels	1,023	
Salt	Bushels	705	
Plaster	Tons	305¾	

¹ *Fourth Annual Report* (1832), Appendix B, 20ff.

Sundries	Variety of articles	
DESCENDING		
Tobacco	Hogsheads	0
Wheat	Bushels	8,093
Flour	Barrels	91,224
Bran, Shorts	Bushels	9,002
Rye and Chop	Bushels	1,281
Corn	Bushels	1,745
Corn Meal	Bushels	0
Flax, Seed	Bushels	Oats 50 Flax 10
Oil	Barrels	2
Hemp, Flax	Pounds	8,900
Whisky	Barrels	1,631
Hogs	Pounds	9,058
Bacon	Pounds	82,500
Lard and Butter	Pounds	11,121
Leather	Pounds	0
Cement	Bushels	15
Stone	Perches	5,377
Coal	Bushels	300
Iron-Pig, Bar and Castings	Tons	21
Wood	Cords	1,407
Sundries ²		0

[Transcribers Note: There are no entries for 1833 to 1841, see footnote 30, page 11]

1842

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	5,294
Plaster	Tons	3,206
Sundries	Large quantities of salt, fresh fish, lumber, laths Shingles and groceries	
DESCENDING		
Wheat	Bushels	214,569
Flour	Barrels	151,966
Corn and Oats	Bushels	59,199
Mill Offal	Bushels	46,472
Coal	Bushels	111,293
Lumber	Feet, B.M.	916,184

² Fourth Annual Report (1832), Appendix B, 20ff.

Wood	Cords	4,279
Whisky	Barrels	1,772
Pig Iron	Tons	710
Limestone	Perches	2,933
Sundries	Large quantities of apples, butter, lard, pork, lime, cement, barrel and hogshead staves. ³	

1843

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	3,533
Salt	Tons	1,240
Plaster	Tons	4,259
Sundries	Quantities of fish in bulk, lumber and groceries.	
DESCENDING		
Wheat	Bushels	142,785
Flour	Barrels	156,242
Corn	Bushels	167,326
Oats	Bushels	38,930
Corn Meal	Bushels	18,942
Mill Offal	Bushels	49,672
Whisky	Barrels	3,398
Limestone	Perches	2,897
Iron Ore	Tons	411
Bituminous Coal	Tons	2,108
Wood and Bark	Cords	5,435
Pork	Pounds	50,324
Lumber	Feet, B.M.	500,000
Sundries	Hay, Straw, Fence Rails, Fruit ⁴	

1844

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	2,075
Salt	Tons	1,295
Plaster	Tons	4,838

³ *Fifteenth Annual Report* (1843), 11.

⁴ *Sixteenth Annual Report* (1844), 46.

Sundries	Considerable quantities of fruit, potatoes, turnips, hay, straw, shingles, laths, coopers' stuff and groceries	
DESCENDING		
Wheat	Bushels	199,620
Flour	Barrels	172,796
Whiskey	Barrels	4,811
Corn	Bushels	173,023
Oats	Bushels	39,000
Corn Meal	Bushels	15,631
Bran, Mill Offal	Bushels	76,683
Wood	Cords	6,802
Lime	Tons	1,118
Limestone	Perches	6,127
Coal	Tons	4,871
Pig Iron	Tons	443
Lumber	Feet, B.M.	Approx. 1,000,000
Sundries	Considerable quantities of fruit, potatoes, turnips, hay straw, shingles, laths, coopers' stuff and groceries. ⁵	

1845

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	4,569
Salt	Tons	1,265
Plaster	Tons	4,721
Lumber	Feet, B.M.	820,000
Shad & Herring (fresh)	Tons	635
Coal	Tons	332
Flour	Barrels	102
Whiskey	Barrels	141
Lime	Tons	21
Potatoes	Bushels	2,511
Iron	Tons	54
Bricks	Number	118,225
Wheat	Bushels	1,708
Flax, Seed	Bushels	21
Oysters	Bushels	1,351
Oats	Bushels	80
Apples	Bushels	22

⁵ *Seventeenth Annual Report* (1845), 32–33.

Sundries	Tons	589
DESCENDING		
Wheat	Bushels	299,607
Flour	Barrels	170,464
Corn	Bushels	126,799
Oats	Bushels	35,464
Corn Meal	Bushels	16,327
Mill Offal	Bushels	38,575
Whiskey	Barrels	5,396
Apples	Bushels	2,685
Lime	Tons	1,115
Limestone	Perches	2,996
Pork	Pounds	15,250
Bacon	Pounds	547
Lard and Butter	Pounds	5,771
Coal, Bituminous	Tons	2,376
Iron	Tons	515
Wood	Cords	5,411
Flax, Seed	Bushels	2,577
Cement	Tons	42
Lumber	Feet, B.M.	508,083
Potatoes	Bushels	1,115
Stone	Perches	12,060 ⁶

1846

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	3,475
Salt	Tons	950
Plaster	Tons	3,839
Lumber	Feet, B.M.	1,061,855
Shad & Herrings (fresh)	Tons	406
Coal	Tons	1,003
Flour	Barrels	133
Whiskey	Barrels	20
Lime	Tons	41
Potatoes	Bushels	1,526
Iron	Tons	361
Bricks	Number	440,946
Flax, Seed	Bushels	19
Oysters	Bushels	598
Corn	Bushels	677

⁶ *Eighteenth Annual Report* (1846), 38–39.

Mill Offal	Bushels	707
Wood, Bark	Cords	90
Cement	Tons	17
Iron Ore	Tons	410
Bacon	Pounds	5,700
Lard and Butter	Pounds	64,960
Nails	Kegs	128
Tobacco	Hogsheads	52
Rails	Rails	887
Sundries	Tons	1,265

Equivalent to 10,986 tons.

1846 (Continued)

DESCENDING	UNITS	TOTAL
Wheat	Bushels	264,115
Flour	Barrels	234,539
Corn	Bushels	30,005
Oats	Bushels	30,047
Rye	Bushels	501
Corn Meal	Bushels	8,437
Mill Offal	Bushels	63,486
Apples	Bushels	8,158
Whiskey	Barrels	1,952
Lime	Tons	958
Limestone	Perches	3,316
Stone	Perches	117
Bacon and Pork	Pounds	27,047
Lard and Butter	Pounds	4,257
Bituminous Coal	Tons	1,952
Iron	Tons	376
Iron Ore	Tons	298
Wood	Cords	4,999
Bark	Tons	286
Lumber	Feet, B.M.	2,851,541
Flax, Seed	Bushels	393
Potatoes	Bushels	3,021
Nails	Kegs	4,739
Cement	Barrels	1,105
Hay	Tons	109
Bricks	Number	17,500
Rails	Number	7,378
Shingles, Staves, Laths	Number	297,025
Tobacco	Hogsheads	92
Sundries	Tons	362 ⁷

⁷ *Nineteenth Annual Report (1847)*, 21-22.

Descending: Equivalent to 49,161 tons
 Ascending: Equivalent to 10,986 tons
 Total: 60,147 tons

1847

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	3,732
Salt	Tons	988
Plaster	Tons	3,829
Lumber	Feet, B.M.	770,300
Shad, Herring (fresh)	Tons	626
Coal	Tons	1,687
Flour	Barrels	115
Whiskey	Barrels	11
Lime	Tons	19
Potatoes	Bushels	1,112
Iron	Tons	104
Bricks	Tons	178,000
Flax, Seeds	Bushels	112
Oysters	Bushels	919
Corn Meal	Bushels	464
Mill Offal	Bushels	3,362
Wood, Bark	Cords	72
Iron Ore	Tons	3,009
Bacon	Pounds	9,300
Nails	Kegs	202
Round Timber	Tons	212
Dry Goods, Groceries		
Sundries	Tons	924

Equivalent to 12,809 tons

1847 (Continued)

DESCENDING	UNITS	TOTAL
Wheat	Bushels	235,212
Flour	Barrels	176,789
Corn	Bushels	238,216
Oats	Bushels	32,035
Rye	Bushels	5,108
Corn Meal	Bushels	17,958
Mill Offal	Bushels	87,644
Apples	Bushels	1,833
Whiskey	Barrels	1,867
Lime	Tons	1,180
Limestone	Perches	5,499

Wrought Stone	Perches	5,656
Bacon, Pork	Pounds	26,965
Butter, Lard	Pounds	2,843
Coal	Tons	2,170
Iron	Tons	1,078
Wood	Cords	5,450
Bark	Cords	954
Lumber	Feet, B. M.	1,583,600
Flax, Seeds	Bushels	1,197
Potatoes	Bushels	2,459
Nails	Kegs	11,892
Cement	Barrels	2,800
Hay	Tons	195
Bricks	Tons	45,500
Round Timber	Tons	107
Shingles, Staves, Laths, Hoop-Poles	Tons	955,525
Tobacco	Hogsheads	103
Sundries	Tons	526 ⁸

Descending: Equivalent to 58,631 tons

Ascending: Equivalent to 12,809 tons

Total: 71,440 tons

1848

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	3,477
Salt	Tons	2,133
Plaster	Tons	7,310
Coal	Tons	880
Shad, Herring (fresh)	Tons	535
Lumber	Feet, B.M.	1,391,000
Lime	Tons	61
Iron	Tons	41
Iron Ore	Tons	2,575
Flour	Barrels	155
Potatoes	Bushels	856
Corn Meal	Bushels	59
Mill Offal	Bushels	278
Oysters	Bushels	4,700
Bricks	Number	22,000
Dry Goods, Groceries, Sundries	Tons	1,010

Equivalent to 16,439 tons

⁸ Twentieth Annual Report (1848), 25, 26.

1848 (Continued)

DESCENDING	UNITS	TOTAL
Wheat	Bushels	220,025
Flour	Barrels	217,112
Corn	Bushels	144,103
Corn Meal	Bushels	7,266
Rye	Bushels	360
Oats	Bushels	12,959
Mill Offal	Bushels	77,553
Flax, Seed	Bushels	852
Potatoes	Bushels	2,135
Apples	Bushels	7,776
Whiskey	Barrels	2,213
Cement	Barrels	1,744
Limestone	Perches	10,030
Rough Stone	Perches	8,879
Lime	Tons	1,366
Coal	Tons	3,284
Iron	Tons	559
Iron Ore	Tons	63
Hay	Tons	95
Nails	Kegs	8,358
Tobacco	Hogsheads	38
Wood	Cords	6,904
Bark	Cords	1,364
Lumber	Feet, B.M.	2,080,600
Shingles, Staves, Laths, Hoop-Poles	Number	993,100
Rails	Number	5,425
Round Timber	Tons	227
Bricks	Number	10,000
Sundries	Tons	685 ⁹

Descending: Equivalent to 69,997 tons

Ascending: Equivalent to 16,439 tons

Total: 86,436 tons

1849

ASCENDING		
ARTICLE	UNIT	TOTAL
Salted Fish	Barrels	3,995
Salt	Tons	2,019
Plaster	Tons	6,599

⁹ Twenty-First Annual Report (1849), 32–33.

Coal	Tons	1,236
Coke	Tons	2,854
Shad and Herring	Tons	434
Lime and Cement	Tons	140
Iron Ore	Tons	4,025
Manures	Tons	324
Bricks	Number	42,000
Lumber	Feet, B.M.	1,617,000
Dry Goods, Groceries, Sundries	Tons	946

Equivalent to 20,778 tons

1849 (Continued)

DESCENDING	UNITS	TOTAL
Wheat	Bushels	240,073
Flour	Barrels	236,620
Corn	Bushels	244,281
Corn Meal	Bushels	7,225
Rye	Bushels	1,795
Oats	Bushels	13,200
Mill Offal	Bushels	45,423
Flax, Seed	Bushels	1,643
Potatoes	Bushels	1,440
Apples	Bushels	12,970
Whiskey	Barrels	2,674
Cement	Barrels	1,382
Limestone	Perches	8,662
Stone (rough)	Perches	17,750
Lime	Tons	723
Coal, Bituminous	Tons	5,224
Iron	Tons	1,351
Hay	Tons	147
Tobacco	Hogsheads	200
Nails	Kegs	3,682
Wood	Cords	5,083
Bark	Cords	1,076
Lumber	Feet, B.M.	1,560,956
Shingles, Staves, Laths, Hoop-Poles	Number	783,800
Rails	Number	3,906
Bricks	Number	39,000
Manures	Tons	324
Sundries	Tons	747 ¹⁰

Descending: Equivalent to 81,263 tons

¹⁰ Twenty-Second Annual Report (1850), 23-24.

Ascending: Equivalent to 20,778 tons
Total: 102,041 tons

1850

ASCENDING		
ARTICLE	UNIT	TOTAL
Ale, Beer, Cider	Tons	.11
Liquors, Wines	Tons	45
Fish, Salted & Fresh	Tons	758
Flour, Meal, Grains, Seeds	Tons	89
Bacon, Meats	Tons	15
Furniture, Empty Barrels	Tons	238
Horses, Livestock	Tons	1
Wrought Stone	Tons	56
Hardware, Nails, Wrought Iron	Tons	85
Tar, Pitch, Rosin	Tons	18
Dry Goods	Tons	66
Groceries	Tons	643
Mill Offal	Tons	18
Potatoes, Turnips	Tons	142
Wagons, Carts, Plows	Tons	5
Iron Castings, Bloom Iron	Tons	43
Oysters	Tons	61
Salt	Tons	1,607
Lumber, Laths, Palings, Shingles, Hoop-Poles	Tons	1,249
Pig and Scrap Iron	Tons	157
Slates, Tiles	Tons	65
Bricks	Tons	61
Lime, Cement	Tons	121
Rough Stone	Perches	19
Rails, Posts, Timber	Tons	12
Ore	Tons	7,455
Coal	Tons	1,783
Coke	Tons	2,205
Wood	Cords	85
Plaster	Tons	5,334
Manures	Tons	561
Sundries	Tons	253
		23,261

1850 (Continued)

DESCENDING	UNITS	TOTAL
Flour	Tons	27,120
Corn Meal, Chop	Tons	72

Wheat	Tons	5,318
Corn	Tons	1,726
Rye, Grain, Seeds	Tons	18
Apples, Fruit	Tons	80
Ale, Beer, Cider, Vinegar	Tons	4
Whiskey	Tons	412
Tobacco	Tons	28
Flax, Hemp, Sumac	Tons	1
Bacon, Meats	Tons	11
Butter, Lard	Tons	21
Furniture, Empty Barrels	Tons	54
Wrought Mill, Grindstones	Tons	3
Nails	Tons	601
Livestock	Tons	2
Mill Offal	Tons	720
Potatoes, Turnips	Tons	24
Bloom, Cast Iron	Tons	65
Hay, Straw	Tons	233
Oats	Tons	166
Lumber, Laths, Palings, Staves, Hoop-Poles	Tons	2,765
Pig, Scrap Iron	Tons	1,196
Bricks	Tons	15
Rough Stone	Perches	13,303
Lime, Cement	Tons	982
Rails, Posts, Timber	Tons	108
Coal	Tons	7,956
Bark	Cords	711
Wood	Cords	4,275
Manures	Tons	339
Limestone	Perches	10,234
Sundries ¹¹	Tons	126

Descending: Equivalent to 78,689 tons

Ascending: Equivalent to 23,261 tons

Total: 101,950 t

¹¹ Report to the Stockholders on the Completion of the Canal (1851), 141–142

APPENDIX B

ASCENDING TRADE: 1851–1878

		1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861
1	Ale, Beer, Cider	33	4	0	8	3	0	0	0	0	0	0
2	Liquors, Wines	214	84	62	52	55	58	28	71	36	17	22
3	Fish, salt & fresh	1,335	455	1,387	1,054	981	960	490	217	248	322	139
4	Flour, meal, grains, seeds	204	137	99	316	613	252	362	244	508	942	674
5	Bacon, meats	28	14	17	16	25	8	8	0	0	0	0
6	Furni- ture, empty barrels	268	270	326	145	201	161	177	82	43	48	69
7	Horses, livestock	2	0	0	0	0	0	0	0	0	0	0
8	Wrought stone	164	38	34	2	14	0	5	398	41	0	0
9	Hard- ware, wrought iron, nails	171	199	132	49	65	82	32	29	4	0	0
10	Tar, pitch, rosin	27	26		14	14	12	0	0	4	3	0
11	Dry goods	199	80	79	97	0	0	0	0	0	0	0
12	Grocer- ies	642	402	658	543	473	356	195	178	220	74	58
13	Mill offal	2	0	0	0	37	10	8	0	0	0	0
14	Potatoes, turnips	45	48	63	40	45	19	10	38	37	7	0
15	Wagons, carts, plows	18	5	23	19	11	0	3	0	0	0	0
16	Iron castings, bloom iron	65	8	28	43	47	140	22	0	11	67	15
17	Oysters	63	53	53	9	58	16	18	39	38	6	0
18	Hay, straw, oats	10	41	0	4	11	0	0	16	0	0	7
19	Salt	2,263	2,851	2,433	1,852	2,342	1,762	1,539	1,945	1,556	1,385	604
20	Lumber, laths, palings, etc.	1,534	1,484	1,983	1,494	1,748	1,679	1,366	884	947	853	143

21	Pig and scrap iron	295	51	48	309	20	151	584	0	0	0	0
22	Slates, tiles	0	0	0	0	0	0	0	0	0	0	0
23	Bricks	167	46	435	72	4,629	138	4,827	2,833	40	455	0
24	Lime, cement	130	18	156	51	436	37	2,050	8,344	59	758	0
25	Rough stone (perches)	119	0	0	20	110	0	0	1,433	0	95	0
26	Rails, posts, timber	144	20	0	9	0	27	0	0	0	0	0
27	Ore	5,239	2,715	5,074	5,220	3,721	3,903	3,069	190	0	0	0
28	Coal	109	206	238	467	241	135	183	670	326	235	0
29	Coke	955	0	0	145	160	0	340	0	0	0	0
		1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861
30	Bark (cords)	0	0	0	0	0	0	0	0	0	0	0
31	Wood (cords)	32	75	140	0	50	0	50	0	0	0	0
32	Plaster	6,567	5,489	6,390	3,298	3,774	2,276	2,136	2,813	2,735	2,241	856
33	Manures	1,079	1,325	1,410	3,302	3,031	2,297	1,300	1,504	1,739	1,898	643
34	Sand	630	0	0	0	1,831	527	2,323	7,365	0	417	0
35	Hides	0	0	0	0	0	0	0	0	0	0	0
36	Ashes	0	0	0	0	0	0	0	0	0	0	0
37	Timber	0	0	0	0	0	0	0	0	0	0	0
38	Sundries	198	82	227	74	93	22	27	103	38	76	20
39	TOTAL	22,951	16,226	21,495	18,724	24,839	15,028	21,152	29,396	8,630	9,899	3,250

ASCENDING TRADE: 1851-1878 (Continued)

		1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872
1	Ale, Beer, Cider	0	0	0	0	0	0	2	57	18	22	9
2	Liquors, Wines	8	20	0	0	0	0	0	0	0	0	0
3	Fish, salt & fresh	162	200	110	104	172	277	240	297	169	305	250
4	Flour, meal, grains, seeds	33	21	49	100	361	128	131	158	122	149	209
5	Bacon, meats	0	0	0	0	0	0	50	15	28	14	5
6	Furniture, empty barrels	118	39	17	47	100	139	173	91	184	523	270
7	Horses, livestock	0	0	0	0	0	0	0	0	3	1	0
8	Wrought stone	0	0	0	0	0	0	2	24	5	84	90
9	Hardware, wrought iron, nails	0	0	0	0	0	0	20	0	24	21	164
10	Tar, pitch, rosin	0	0	0	0	0	0	17	0	8	28	2

11	Dry goods	0	0	0	0	0	315	193	266	258	223
12	Groceries	166	46	5	0	0	21	0	0	0	17
13	Mill offal	0	0	0	0	0	8	24	8	46	23
14	Potatoes, turnips	9	46	0	0	0	6	4	4	0	0
15	Wagons, carts, plows	0	0	0	0	0	172	97	41	34	17
16	Iron cast- ings, bloom iron	0	38	0	0	0	24	479	115	27	7
17	Oysters	0	0	0	0	0	10	0	3	4	9
18	Hay, straw, oats	0	0	0	0	0	0	6	4	45	1,418
19	Salt	478	535	545	498	873	794	1,362	1,280	1,296	2,043
20	Lumber, laths, pal- ings, etc.	131	102	207	543	607	705	975	1,923	933	1,929
21	Pig and scrap iron	0	354	0	0	0	40	0	0	6	18
22	Slates, tiles	0	0	0	0	0	0	0	0	0	0
23	Bricks	0	50	24	0	6	146	28	18	96	201
24	Lime, ce- ment	81	25	19	0	51	50	126	90	43	49
25	Rough stone (perches)	0	0	0	0	0	0	4	0	3	0
26	Rails, posts, tim- ber	0	0	0	0	0	19	8	9	37	2
27	Ore	0	0	0	0	2,478	5,067	2,618	7,000	5,801	8,960
28	Coal	61	80	10	0	90	147	120	262	177	192
29	Coke	0	0	0	0	0	0	0	11	0	0
		1862	1863	1864	1865	1866	1867	1868	1869	1870	1871
30	Bark (cords)	0	0	0	0	0	0	0	0	0	2
31	Wood (cords)	0	0	0	0	0	0	171	298	0	0
32	Plaster	274	574	382	664	682	1,328	1,181	792	879	943
33	Manures	1,029	632	477	647	1,062	959	1,845	1,476	913	1,780
34	Sand	0	80	0	0	0	0	234	1,164	867	672
35	Hides	0	0	0	0	0	234	396	345	528	2
36	Ashes	0	0	0	0	0	0	113	91	0	99
37	Timber	0	0	0	0	0	0	30	4	153	22
38	Sundries & Ice	53	94	46	104	166	186	30	29	22	53
39	TOTAL	2,603	2,936	1,891	2,707	6,648	10,160	10,479	14,238	12,719	18,552
											20,060

ASCENDING TRADE: 1851–1878 (Continued)

		1873	1874	1875	1876	1877	1878
1	Ale, Beer, Cider	22	3	3	7		
2	Liquors, Wines	0	0	0	0	0	0
3	Fish, salt & fresh	245	149	51	44	54	13
4	Flour, meal, grains, seeds	126	90	475	235		
5	Bacon, meats	1	6	5	5		
6	Furniture, empty barrels	255	260	283	221		

7	Horses, livestock	0	0	2	4		
8	Wrought stone	3	0	8	3		
9	Hardware, wrought iron, nails	1	1	7	13		
10	Tar, pitch, rosin	0	43	1	0		
11	Dry goods	236	169	169	97		
12	Groceries	0	0	0	0		
13	Mill offal	20	6	31	4		
14	Potatoes, turnips	0	0	0	0		
15	Wagons, carts, plows	13	6	10	16		
16	Iron castings, bloom iron	0	4	0	0		
17	Oysters	6	9	6	2		
18	Hay, straw, oats	690	235	77	364		
19	Salt	1,906	1,157	1,164	790	711	791
20	Lumber, laths, palings, etc.	1,147	627	443	347		
21	Pig and scrap iron	23	10	0	2		
22	Slates, tiles	0	5	52	1		
23	Bricks	162	149	14	46		
24	Lime, cement	47	29	121	157		
25	Rough stone (perches)	0	30	9	14		
26	Rails, posts, timber	50	29	25	65		
27	Ore	8,458	6,380	2,560	0		
28	Coal	280	295	241	530		
29	Coke	0	0	0	12		
30	Bark (cords)	0	0	4	0		
		1873	1874	1875	1876	1877	1878
31	Wood (cords)	0	25	55	64		
32	Plaster	1,610	1,883	2,075	2,484	4,975	3,446
33	Manures	418	1,552	1,633	1,981	1,219	2,511
34	Sand	414	694	295	4		
35	Ice & Hides	0	75	416	26		
36	Corn, (in ear)	119	31	20	2		
37	Apples, Melons, etc.	0	14	51	6		
38	Sundries	19	12	32	162		
39	TOTAL	16,271	13,978	10,338	7,711	6,959	6,761 ¹²

¹² Annual Reports, Statements of Articles Transported, 1850-78, C & O Co

APPENDIX C

DESCENDING TRADE: 1851–1878

		1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
1	Flour	25,761	26,755	25,602	15,643	14,240	14,853	10,967	11,007	12,106	11,087
2	Corn Meal, Chop	317	199	204	136	33	41	95	68	79	31
3	Wheat	6,861	9,805	9,966	5,417	6,986	9,017	3,750	4,402	5,531	5,452
4	Corn	5,783	4,755	8,327	2,618	628	6,893	5,592	6,275	4,931	3,048
5	Rye, grains, seeds	111	98	111	39	12	58	10	329	79	35
6	Apples, fruit	29	99	68	18	55	615	71	20	5	0
7	Ale, beer, cider, vinegar	4	16	0	0	0	0	0	0	0	0
8	Whiskey	432	450	326	250	133	242	248	293	160	51
9	Tobacco	44	25	56	11	2	3	0	3	12	11
10	Flax, hemp. Sumac	14	13	14	10	1	0	0	25	24	0
11	Bacon, meats	84	25	96	13	77	66	0	29	0	0
12	Butter, lard	12	21	31	17	18	0	0	0	0	0
13	Furni- ture, empty barrels	297	199	349	297	295	414	82	92	99	150
14	Wrought mill, grind- stones	1	0	3	1	3	120	0	0	0	0
15	Wrought iron, hard- ware	25	7	4	4	11	0	0	0	742	0
16	Nails	645	108	159	56	0	0	00	0	0	0
17	Live- stock	8	0	0	10	6	0	0	0	0	0
18	Mill offal	994	832	1,131	533	388	425	288	549	391	518
19	Pota- toes, turnips	114	27	66	71	2	0	21	22	12	12
20	Bloom, cast iron	4	8	94	68	9	43	8	561	0	1,266
21	Hay, straw	276	143	470	318	226	104	137	102	253	227
22	Oats	262	116	113	77	77	158	160	228	261	205
23	Lumber, laths, palings,	2,736	2,640	3,606	2,588	3,051	3,209	1,847	2,669	2,810	0

24	Charcoal	0	0	0	0	0	0	0	0	0	0
25	Pig, scrap iron	910	1,650	2,418	201	2,505	2,541	1,212	372	225	50
26	Bricks	48	277	95	2,094	1,771	727	842	434	1,934	1,346
27	Rough stone (perches)	31,856	20,136	12,109	13,709	17,722	7,608	4,890	10,171	1,727	8,030
28	Lime, cement	1,312	1,112	2,223	2,313	2,141	1,379	1,618	2,293	558	679
29	Rails, posts, timber										
		287	268	238	117	124	107	236	75	10	23
		1851	1852	1853	1854	1855	1856	1857	1858	1859	1860
30	Ore	37	0	1,098	2,485	365	0	0	0	0	0
31	Coal	82,690	63,289	151,959	145,319	188,029	205,568	123,526	254,684	300,743	283,249
32	Coke	1,161	2,346	4,593	3,633	3,060	3,110	2,045	0	0	0
33	Bark (cords)	940	679	1,429	1,667	1,467	1,921	1,361	869	1,351	1,728
34	Wood (cords)	4,776	4,308	3,927	3,018	3,820	3,657	3,266	2,921	3,488	2,671
35	Manures	448	206	576	255	509	342	0	84	0	321
36	Lime- stone (perches)	11,501	10,260	17,176	13,500	10,007	9,057	11,367	13,149	13,424	11,425
37	Sand	0	207	427	555	533	464	2,306	12,388	0	95
38	Sundries	162	290	146	138	107	66	27	78	131	84
39	De- scending TOTAL	180,942	151,369	249,210	217,199	258,413	272,808	175,373	324,192	351,086	334,533
	Ascend- ing TOTAL	22,951	16,226	21,495	18,724	24,839	15,028	21,152	29,396	8,630	9,999
	Aggre- gate TOTAL	203,893	167,595	270,705	235,923	283,252	287,836	196,525	353,588	359,716	344,532

DESCENDING TRADE: 1851-1878 (Continued)

		1861	1862	1863	1864	1865	1866	1867	1868	1869
1	Flour	7,067	7,340	8,566	5,962	5,383	2,620	3,058	2,120	2,220
2	Corn Meal, Chop	89	0	35	90	69	106	1,008	205	71
3	Wheat	4,286	6,640	9,014	6,168	5,700	4,946	9,510	9,164	15,147
4	Corn	1,941	1,027	1,789	1,914	775	6,307	10,794	5,502	2,339
5	Rye, grains, seeds	14	23	6	6	0	0	29	41	43
6	Apples, fruit	0	0	0	34	0	322	0	7	130
7	Ale, beer, cider, vinegar	0	0	0	0	0	0	0	2	21
8	Whiskey	24	38	0	0	0	0	0	1	0
9	Tobacco	0	0	0	0	0	0	0	0	9
10	Flax, hemp. Sumac	0	0	0	0	0	0	0	4	0
11	Bacon, meats	0	0	0	0	0	0	0	26	0
12	Butter, lard	0	0	0	0	0	0	0	5	1
13	Furniture, empty barrels	29	60	104	158	0	0	0	29	23

14	Wrought mill, grindstones	0	0	0	0	0	0	0	0	0
15	Wrought iron, hardware	0	0	0	0	0	0	0	0	0
16	Nails	0	0	0	0	0	0	0	0	0
17	Livestock	0	0	0	0	0	0	0	5	1
18	Mill offal	520	534	395	254	250	228	217	211	205
19	Potatoes, turnips	0	0	7	53	0	0	0	64	0
20	Bloom, cast iron	0	0	0	0	0	17	0	46	0
21	Hay, straw	236	175	165	417	265	221	35	42	12
22	Oats	205	40	44	623	87	162	162	92	99
23	Lumber, laths, palings,	1,994	1,693	1,403	1,248	1,216		3051	2,936	1,097
24	Charcoal	0	0	0	0	0	0	0	101	26
25	Pig, scrap iron	50	0	1,103	237	292	612	1,785	2,225	3,782
26	Bricks	72	499	87	378	0	340	404	3,057	1,145
27	Rough stone (perches)	2,852	760	19	390	2,900	589	2,970	4,503	4,161
28	Lime, cement	467	49	794	601	1,004	2,080	3,143	1,975	1,985
29	Rails, posts, timber	35	15	80	93	0	0	0	131	54
		1861	1862	1863	1864	1865	1866	1867	1868	1869
30	Ore	0	0	0	0	0	108	0	2,236	360
31	Coal	119,893	94,819	229,416	260,368	340,736	344,160	458,009	484,849	661,828
32	Coke	0	0	0	0	0	359	0	0	0
33	Bark (cords)	97	335	647	837	544	1,115	705	980	1,104
34	Wood (cords)	3,773	8,025	4,513	3,888	3,971	2,900	1,931	2,016	2,492
35	Manures	70	0	0	0	0	0	0	48	1
36	Limestone (perches)	642	1,936	4,650	4,727	6,386	7,845	10,091	16,148	11,204
37	Sand	416	0	0	315	0	0	4,208	2,265	40
38	Sundries & Ice	53	182	74	120	50	28	90	552	190
39	Descending TOTAL	144,814	124,190	262,911	288,881	369,628	376,750	511,242	541,508	709,700
	Ascending TOTAL	8,250	2,603	2,936	1,891	2,707	6,658	10,160	10,479	14,238
	Aggregate TOTAL	148,064	126,793	265,847	290,772	372,335	383,408	521,402	552,987	723,938

DESCENDING TRADE: 1851–1878 (Continued)

		1870	1871	1872	1873	1874	1875	1876	1877	1878
1	Flour	1,845	2,025	980	1,744	1,526	1,000	734	519	634
2	Corn Meal & Chop	299	108	177	4	4	19	291		
3	Wheat	11,710	14,369	8,416	8,569	9,780	8,894	11,754	10,048	14,005
4	Corn	2,929	5,005	3,844	3,285	5,312	3,553	6,723	5,382	2,489
5	Rye, grains, seeds	58	62	197	67	107	73	166		
6	Apples, fruit	102	74	135	46	24	56	11		
7	Ale, beer, cider, vinegar	13	5	31	4	39	10	6		
8	Whiskey	17	14	2	0	0	0	0		
9	Tobacco	0	2	0	0	0	0	0		

10	Flax, hemp. Sumac	81	158	136	11	111	289	208		
11	Bacon & other meats	0	10	5	1	6	0	1		
12	Butter, lard	2	5	0	0	0	0	0		
13	Furniture, empty barrels	22	76	79	57	41	147	32		
14	Wrought mill, grindstones	20	252	361	0	1,601	700	0		
15	Wrought iron, hardware	1	4	59	0	5	2	1		
16	Nails	2	0	0	0	0	0	0		
17	Livestock	0	3	9	1	5	30	19		
18	Mill offal	254	239	75	390	233	70	157		
19	Potatoes, turnips	8	23	6	0	0	0	31		
20	Iron, bloom and cast	3	10	27	20	4	14	17		
21	Hay, straw	67	220	235	192	215	153	127		
22	Oats	196	109	27	74	67	25	52		
23	Lumber, laths, palings,	968	2,410	1,761	1,582	1,102	1,270	1,696	353	1,665
24	Charcoal, Ice, Fire Clay	74	1,200	1,850	26	0	39	0		
25	Iron, pig & scrap	1,833	4,247	3,730	1,874	3,053	669	172		
26	Sand		245	751			142			
27	Bricks	4,073	23,840	12,308	4,086	1,303	2,456	0		
28	Rough stone (perches)	4,133	15,177	31,243	15,994	12,146	11,462	6,416	4,357	1,364
29	Lime, cement	608	9,473	4,970	4,700	5,602	7,596	1,533	4,478	12,151
		1870	1871	1872	1873	1874	1875	1876	1877	1878
30	Rails, posts, timber	0	75	618	237	87	319	1,751		
31	Wagons, Coke, Ice	0	1	0	0	60	2,965	438		
32	Coal	696,707	848,199	814,335	796,717	836,996	904,898	654,409	623,096	630,292
33	Plaster, Coal Anthracite	0	70	102	10		152			
34	Bark (cords)	161	4,501	1,370	434	275	462	0		
35	Wood (cords)	2,289	3,635	2,499	4,336	1,349	1,077	292		
36	Manures	0	30	51	145	1,198	44	1,008		
37	Limestone (perches)	10,451	14,145	12,916	12,868	13,666	14,559	28		
38	Leather or Ore	82	4	64	200	0	253	13,191		
39	Sundries	25	250	42		55	69	90		
40	Descending TOTAL	649,053	950,275	903,521	864,359	895,981	963,467	701,419		
	Ascending TOTAL	12,719	18,552	20,060	16,271	13,978	10,338	7,711	6,959	6,761
	Aggregate TOTAL	661,772	968,827	923,581	880,630	909,959	973,805	709,130		

APPENDIX D

TOLLS COLLECTED 1830–1850

TOLLS COLLECTED ON POTOMAC RIVER AND POTOMAC COMPANY WORKS

JUNE 1828 TO OCTOBER 31, 1830	\$33,281.26
OCTOBER 31, 1830 TO DECEMBER 31, 1830	142.61
TOTAL	\$33,423.87

TOLLS COLLECTED ON CHESAPEAKE & OHIO CANAL

	ASCENDING	DESCENDING	TOTAL
1830			\$2,044.36
1831			32,992.66
1832			24,976.02
1833			16,663.49
1834			20,131.62
1835			26,568.15
1836			28,769.33
1837			26,702.49
1838			34,958.55
1839			47,865.94
1840			43,808.02
1841			57,012.29
1842			56,005.80
1843			44,540.51
1844			52,674.24
1845			51,810.70
1846 ¹³	\$6,078.81	\$47,278.38	53,357.19
1847	6,774.80	45,665.55	52,440.35
1848	8,405.40	45,740.81	54,146.21
1849	9,188.84	52,634.33	61,823.17
1850 ¹⁴	9,628.21	54,813.81	64,442.02
			\$853,733.11

¹³ Prior to 1846, the tolls from the ascending and descending trade were not kept separately.

¹⁴ *Report to the Stockholders on the Completion of the Canal*, Appendix K, 152.

APPENDIX E

TOLLS COLLECTED 1851–1889

	ASCENDING	DESCENDING	TOTAL
1851	\$14,499.67	\$96,004.76	\$110,504.43
1852	10,846.14	81,402.76	92,248.90
1853	15,430.73	129,669.81	145,100.54
1854	12,906.48	106,399.55	119,306.03
1855	15,528.17	123,147.67	138,675.84
1856	14,306.70	138,744.66	153,051.36
1857	8,664.16	86,138.21	94,802.37
1858			171,084.91
1859			189,134.57
1860			182,343.86
1861	5,234.27	65,332.72	70,566.99
1862			63,985.85
1863			154,928.26
1864	10,690.09	215,207.25	225,897.34
1865	14,531.52	331,633.95	346,165.47
1866	15,085.78	340,574.98	355,660.76
1867	20,541.44	354,391.31	374,932.75
1868	21,717.54	255,261.17	276,978.71
1869			368,483.42
1870			342,644.40
1871	37,029.86	447,989.79	485,019.65
1872	34,646.37	424,988.22	459,654.59
1873			482,528.57
1874	33,690.82	466,725.42	500,416.24
1875			458,534.66
1876			290,274.39
1877	13,272.57	174,484.09	187,756.66
1878	14,861.98	267,319.20	282,181.18
1879	12,640.22	222,330.30	234,970.52
1880			361,757.68
1881	12,446.01	271,989.58	284,435.59
1882	7,511.84	136,218.92	143,730.76
1883	15,975.03	269,058.97	284,234.00
1884	8,249.06	127,444.53	135,693.59
1885	9,561.14	97,379.25	106,940.39
1886	7,057.92	74,660.81	81,718.73
1887			110,667.83
1888	6,609.17	114,609.08	121,218.25
1889 ¹⁵			20,500.34

¹⁵ Annual Reports

APPENDIX F

TOLLS COLLECTED 1891–1924

1891	
1892	\$135,979.89
1893	130,923.35
1894	117,622.29
1895	116,728.40
1896–1905 ¹⁶	
1906	59,840.01
1907	64,425.92
1908	62,094.16
1909	59,105.66
1910	52,965.37
1911	77,527.55
1912	41,644.24
1913	41,407.71
1914	42,236.97
1915	41,271.46
1916	38,956.77
1917	40,545.74
1918	71,404.43
1919	47,346.95
1920	62,102.38
1921	42,017.33
1922	3,435.18
1923	31,899.32
1924 ¹⁷	1,215.60

¹⁶ No statistics available on tolls received.

¹⁷ Tolls are given after deduction for rebates.

Source: Reports of Trustees, Sanderlin, *The Great National Project*, 308.

APPENDIX G:

CANAL TRADE 1850–1876

	TOTAL TONNAGE	ASCENDING TONNAGE	DESCENDING TONNAGE	AVERAGE DISTANCE OF ARTICLES TRANSPORTED	AVERAGE TOLL PAID PER MILE	TOTAL TOLLS
1850	101,950	23,261	78,689	56 Miles	1.128	\$34,442
1851	203,893	22,951	180,942	102.20	0.542	110,504.43
1852	167,595	16,226	151,369	102.50	0.554	92,248.90
1853	270,705	21,495	249,210	127.67	0.536	145,100.54
1854	235,923	18,724	217,199	132.00	0.557	119,306.03
1855	283,252	24,839	258,413	137.00	0.489	138,675.84
1856	287,836	15,028	272,808	147.50	0.566	153,051.36
1857	196,525	21,152	175,373	132.50	0.482	94,802.37
1858	353,588	29,396	324,192	133.50	0.484	171,084.91
1859	359,716	8,630	351,086	163.50	0.315	189,134.57
1860	344,532	9,999	334,533	160.00	0.315	182,343.86
1861	148,064	8,250	144,814	147.25	0.310	70,566.99
1862	126,793	2,603	124,190	147.00	0.343	63,985.85
1863	265,847	2,936	262,911	166.00	0.350	154,928.26
1864	290,772	1,891	288,881	165.00	0.452	225,897.37
1865	372,335	2,707	369,628	171.00	0.554	346,165.47
1866	383,408	6,658	376,750	169.00	0.550	355,660.76
1867	521,402	10,160	511,242	167.00	0.430	374,932.75
1868	552,987	10,479	541,508	163.00	0.320	276,978.71
1869	723,938	14,238	709,700	163.00	0.320	368,483.42
1870	661,772	12,719	649,053	161.00	0.320	342,644.40
1871	968,827	18,552	950,275	161.00	0.310	485,019.65
1872	923,581	20,060	903,521	162.00	0.307	459,654.59
1873	880,630	16,271	864,359	163.00	0.337	482,528.57
1874	909,959	13,978	895,981	165.00	0.333	500,416.24
1875	973,805	10,338	963,464	164.00	0.287	458,534.66
1876	709,130	7,711	701,419	163.00	0.239	¹⁸ 290,274.39

¹⁸ Statements of Articles Transported, 1850–76, C & O Co.

APPENDIX H:

CUMBERLAND COAL TRADE: 1842–1877

	FROSTBURG REGION	PIEDMONT REGION	VIA B&O R.R.	VIA C&O CANAL	VIA PA. R.R.	TOTAL
1842	1,708		1,708			1,708
1843	10,082		10,082			10,082
1844	14,890		14,890			14,890
1845	24,653		24,653			24,653
1846	29,995		29,995			29,795
1847	52,940		52,940			52,940
1848	79,571		79,571			79,571
1849	142,449		142,449			142,449
1850	196,848		192,806	4,042		196,848
1851	257,679		174,701	82,978		257,679
1852	334,178		268,459	65,719		334,178
1853	460,254	73,725	376,219	157,760		533,979
1854	478,378	181,303	503,836	155,845		659,681
1855	369,457	292,915	478,486	183,786		662,272
1856	394,475	311,975	502,330	204,120		706,450
1857	278,490	303,996	465,912	116,574		582,486
1858	368,278	281,378	395,405	254,251		649,656
1859	418,680	305,674	426,512	297,842		724,354
1860	447,047	341,862	493,031	295,878		788,909
1861	147,460	122,214	172,075	97,599		269,674
1862	211,425	106,109	218,950	98,684		317,634
1863	445,675	302,670	531,553	216,792		748,345
1864	613,444	44,552	399,354	258,642		657,996
1865	832,150	71,345	560,293	343,202		903,495
1866	988,467	90,964	736,153	343,178		1,079,331
1867	1,121,290	72,532	735,669	458,153		1,193,822
1868	1,241,785	88,658	848,118	482,325		1,330,443
1869	1,798,945	83,724	1,230,518	653,151		1,882,669
1870	1,628,052	89,023 ¹⁹	1,112,938	604,137		1,717,075
1871	2,167,482	177,681	1,494,814	850,339		2,345,153
1872	2,148,666	206,805	1,517,347	816,103	22,021	2,355,471
1873	2,492,716	181,375	1,745,429	778,802	114,589	2,674,101
1874	2,243,754	166,636	1,576,160	767,064	67,671	2,410,895
1875	2,188,436	154,337	1,392,237	879,838	160,698	2,342,773
1876	1,718,853	116,228	1,032,285	632,440	131,866	1,835,081
1877	1,574,339		818,459 ²⁰	584,996	170,884	1,574,339
	27,323,253	4,167,523 ²¹	20,739,908	10,683,240	667,729	32,090,877

¹⁹ From 1870, this figure includes coal mined in West Virginia

²⁰ This figure includes 36,394 tons used on the line of the Cumberland and Pennsylvania Railroad and its branches and at Cumberland and Piedmont. Also, 94,362 tons were used by the B & O Railroad in its locomotive rolling mills, etc.

APPENDIX I:

CUMBERLAND COAL TRADE: 1872, 1873, 1874 & 1875

SHIPMENTS BY CUMBERLAND COAL COMPANIES

	1872 ²²	1873 ²³	1874 ²⁴	1875 ²⁵
Firebricks	459	19		39
Lumber	208	268		382
Other Articles	97	46		34
American Coal Company	127,740	129,387	122,649	122,612
Borden Company	107,436	109,788	111,443	182,092
Consolidated Coal Company	215,804	96,244	135,619	171,905
George's Creek Coal & Iron Co.	40,751	40,667	38,624	24,223
Hampshire & Baltimore Coal Co.	41,218	54,043	52,908	53,645
Maryland Company	60,632	110,663	157,104	195,890
New Central Company	145,976	156,340	100,179	93,036
Keystone Coal Company			4,849	
Blaen Avon Company			35,916	34,074
Atlantic Coal Company			12,060	1,413
Individuals	64,988	100,703		
Gas Coal Company			65,642	25,904
TOTAL	805,309	797,838	836,997	905,249

²¹ Of this sum, 35,149 tons of coal were shipped to the canal via Piedmont and the B & O Railroad.²² *Forty-Fifth Annual Report* (1873), Table M²³ *Forty-Sixth Annual Report* (1874), Table H²⁴ *Forty-Seventh Annual Report* (1875), Table H²⁵ *Forty-Eighth Annual Report* (1876), Table H

APPENDIX J:

CUMBERLAND COAL TRADE: 1872, 1873, 1874 & 1875

POINTS TO WHICH COAL SHIPMENTS WERE MADE

	1872 ²⁶	1873 ²⁷	1874 ²⁸	1875 ²⁹
Georgetown	786,951	763,403	794,241	858,673
Point of Rocks & Knoxville	589	598	304	417
Harpers Ferry	507	534	1,013	782
Antietam	10,043	4,371	6,204	1,451
Shepherdstown	3,011	3,186	2,301	1,337
Williamsport	9,599	22,367	29,395	39,435
Hancock	1,789	1,701	1,345	1,180
Berlin (Brunswick)	243	209	318	106
Monocacy & Other Points	487			227
Oldtown & Sharpsburg	331	211	167	244
Mercerville & Falling Waters	327	343	710	211
Four Locks (and Two Locks)	481	724	549	450
White's & Conrad's Ferry		185	328	271
Noland's Ferry			117	
TOTAL	814,358	797,838	836,997	904,784

²⁶ *Forty-Fifth Annual Report* (1873), Table M

²⁷ *Forty-Sixth Annual Report* (1874), Table H

²⁸ *Forty-Seventh Annual Report* (1875), Table H

²⁹ *Forty-Eighth Annual Report* (1876), Table H

APPENDIX K:

CUMBERLAND COAL TRADE: 1877
GENERAL COAL SHIPMENTS—1877

	TONNAGE
Fire Bricks	827.17
Lumber	291.00
Other Articles	171.10
American Company	92,044.05
Borden Company	70,542.12
Consolidated Coal Company	125,183.04
New Central Company	127,068.14
Maryland Company	99,796.13
Hampshire and Baltimore Coal Company	34,132.18
Blaen Avon Company	31,647.04
Gas Coal	22,681.04
TOTAL ³⁰	603,096.14

³⁰ *Fiftieth Annual Report* (1878), 24.

APPENDIX L:

CUMBERLAND COAL TRADE: 1879–1888
 DESTINATIONS OF COAL SHIPMENTS

TO: Georgetown	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
American Coal Company	67,805	87,276	39,201	37,717	89,516	31,385	1,141			
Borden Mining Company	83,551	98,918	104,497	37,866	71,194	49,393	68,057	44,836	28,942	17,279
Blaen Avon Coal Co.	35,129	43,694	23,817	7,012	58,185	306	232	426		
Consolidation Coal Co.	111,232	132,133	137,093	59,891	109,871	90,133	71,757	66,458	78,136	73,371
Georges Creek Coal	14,284	38,116	37,324	14,654	92,541	62,876	93,189	67,938	84,831	106,183
Gas Coal Company	22,584		3,067	17,623						
Hampshire & Balt. Coal	15,145	3,138	14,335							
Keystone Coal Company	1,745		561	404						
Maryland Coal Company	43,274	88,204	41,093	38,068	121,916	25,739	71,754	46,852	2,561	
New Central Coal Co.	90,243	67,722	60,986	33,366	32,716	468	352			
"Gas," Sinclair Company		6,561	8,731							
Gaston Coal Company		3,947	4,288	4,001	3,926	780	3,199	2,208		
Despard Coal Company		1,485	1,548	1,501	1,482	1,528	2,061	1,841	227	
Elk Garden Company		350							6,773	
Piedmont Coal & Iron		5,755	926	474						
Buffalo Valley Company				2,252						
Cumberland & Elk Lick				3,487						
National Coal Company				3,295	13,731	4,905	219			

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WV Central & Pittsburgh			12,013	12,213	20,422					
Pennsylvania Gas Co.					16,907	16,274	13,876	4146		
Rafferty Gas Company					7,386	4,137				
Bigley "Gas" Company						4,909	8,841	776		
Youghiogheny Gas Co.						3,478	3,869	3,806		
Beverly Gas Company							1,138	225		
Charles Garden Company										14,491
TOTALS	484,996	577,305	477,423	273,833	639,799	296,316	339,690	239,518	201,472	211,325

TO: Williamsport	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Borden Mining & Coal Co.	16,824	1,302	413	117	336	111			114	111
Blaen Avon Coal Company	781	1,253	112		159					
Consolidation Coal Company	14,987	25,812	35,378	36,279	54,504	56,387	45,042	47,278	62,160	51,264
Gas Coal Co.	217		316							
Hampshire & Balt. Coal Co.	220									
Maryland Coal Co.	2,728	3,832	1,784							
New Central Coal Co.			104							
Cumberland & Elk Lick Co.		339		365						
Gas Coal Co.		344		227						
Piedmont Coal & Iron Co.				2,991						
American Coal Co.					116	4,424	4,599	5,603	1,916	
Georges Creek Coal					452		5,192	443	439	225

& Iron Co.											
Newburgh & Orrel Gas Co.		118			228	105					
National Coal Co.					7,152	15,397	645				
Elk Garden Co.									8,474	20,502	
TOTALS	35,760	33,003	38,109	39,981	62,951	78,425	55,479	53,325	73,105	72,104	

TO: Hancock	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Borden Mining & Coal Co.	308	228	542		110			104	310	1,258
Blaen Avon Coal Co.	338	59	62		105	230				
Consolidation Coal Co.	772	438	757		667	225	545	328	159	112
Keystone Coal Company		84								
American Coal Co.			117	427	317	543	620	624	114	
Maryland Coal Co.			98	218						
Cumberland & Elk Lick Co.				117						
New Central Coal Co.				125						
National Coal Co.			115	115	113	320	113			
Piedmont Coal & Iron Co.				90						
Georges Creek Coal & Iron Co.					109	118	552	519	950	
Elk Garden Co.									518	652
TOTALS	1,418	811	1,577	1,095	1,424	1,438	1,832	1,576	2,053	2,023
TO: Harpers Ferry	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Consolidation Coal Co.	331	222	180							
Piedmont Coal & Iron Co.		329								
Hampshire & Balt. Coal Co.	432									
Borden Mining & Coal Co.					81			24		
George's Creek Coal & Iron Co.									121	
American Coal Co.							333		225	112
TOTALS	763	552	180	0	81	0	333	24	346	112
TO: Shepherdstown	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Blaen Avon Coal Company	52	327				216				
Consolidation Coal Company	423	1550	2,180	540	559	561	458	535	431	565
Piedmont Coal & Iron Co.		215								
Maryland Coal Company	108	108								
Borden Mining & Coal Co.			99							

New Central Coal Company		227	110							
American Coal Company				215	1,686	2,297	113			
National Coal Company				226	337	102		102		
Elk Garden Company									99	236
Georges Creek Coal & Iron Co.						114		111	180	334
Keystone Coal Company						210				
TOTALS	584	2,429	2,390	982	2,583	3,502	572	750	711	1,136
TO: Four Locks	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Borden Mining & Coal Co.	333									
Consolidation Coal Co.	93									
New Central Coal Co.	113									
TOTALS	540		0	0	0	0	0	0	0	0
TO: Conrad's Ferry	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Blaen Avon Coal Co.	315									
Maryland Coal Co.	101									
TOTALS	416		0	0	0	0	0	0	0	0
TO: Berlin (Bruns-wick)	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Consolidation Coal Co.	182	325	303	180						
Big Vein (Pa.)			92							
Piedmont Coal & Iron Co.			109							
National Coal Co.					105	118				
TOTALS	182	325	505	180	105	118	0	0	0	0
TO: White's Ferry	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Blaen Avon Coal Co.		305	646		207					
National Coal Co.				227	267	341				
TOTALS	0	305	646	227	474	341	0	0	0	0
TO: Knoxville	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
New Central Coal Co.		116	355	112						
Consolidation Coal Co.		123		118						
Piedmont Coal & Iron Co.			110		116					
TOTALS	0	350	355	347	0	0	0	0	0	0
TO: Point of Rocks	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888
Blaen Avon Coal Co.					106			220		
National Coal Co.						101	103			
George's Creek Coal Co										110
TOTALS³¹	0	0	0	0	106	101	103	220	0	110

³¹ Data derived from *Fifty-Second, Fifty-Third, Fifty-Fourth, Fifty-Fifth, Fifty-Sixth, Fifty-Seventh, Fifty-Eighth, Fifty-Ninth, Sixtieth and Sixty-First Annual Reports*.

APPENDIX M:

CUMBERLAND COAL TRADE: 1870–1888
NUMBER OF BOATS CLEARED WITH COAL FROM PORT OF CUMBERLAND

	BOATS	TONNAGE	AVERAGE PER BOAT
1870	5,537	606,707	109
1871	7,801	848,200	108
1872	7,412	814,365	109
1873	7,126	797,838	112
1874	7,378	836,997	113
1875	7,995	904,898	113
1876	5,700	654,409	114
1877	5,380	603,096	112
1878	5,525	630,293	114
1879	4,627	522,904	113
1880	5,464	615,423	112
1881	4,667	521,189	111
1882	2,803	316,648	113
1883	6,283	707,466	112
1884	3,378	378,352	112
1885	3,559	398,012	111
1886	2,699	295,415	109
1887	2,538	277,688	109
1888	2,518	286,813	114 ³²

³² *Sixty-First Annual Report* (1889), 23

APPENDIX N:

CUMBERLAND COAL TRADE: 1879-1889

COAL TONNAGE TOTALS: 1879-1889

	TONNAGE
1879	522,904
1880	615,423
1881	521,189
1882	316,648
1883	707,468
1884	378,352
1885	398,012
1886	295,415
1887	277,688
1888	286,183
1889 ³³	57,079

NOTE: The canal company kept statistics only for the coal tonnage after 1878.

³³ SOURCE: Annual Reports, Sanderlin, *The Great National Project*, 308.

**HISTORIC RESOURCE STUDY
CHESAPEAKE & OHIO CANAL NHP**

9.

**MANAGEMENT OF
MAINTENANCE
OPERATIONS ON
THE C & O CANAL
1830-1924**

BY HARLAN D. UNRAU
HISTORIAN, C&O CANAL RESTORATION TEAM, SENECA
DENVER SERVICE CENTER
1976

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I. FIRST PROVISIONS FOR MANAGEMENT OF CANAL MAINTENANCE ACTIVITIES: 1830

In November 1830 the first portion of the canal between Dams Nos. 1 and 2 was opened to navigation.¹ On October 1 the management of the operation and maintenance of this stretch of the canal, as well as the superintendence of the construction of the line between the tidelock at Georgetown and Dam No. 1 and between Seneca and Point of Rocks was divided into two residencies, each in the charge of an engineer.² The 1st Residency stretched from the eastern terminus of the waterway to Section No. 40 (about 2½ miles above Seneca) and the 2nd Residency covered the remainder of the canal to Section No. 84 at Point of Rocks. Thomas Purcell, the resident engineer of the 1st Residency, had his headquarters near Dam No. 2, while Daniel Van Slyke, the resident engineer of the 2nd Residency had his office near Aqueduct No. 2. In addition to his other duties, Van Slyke was named as the first superintendent of the canal with supervisory responsibility over all the newly-designated lock tenders between Dams Nos. 1 and 2.³

The responsibilities of the superintendent and the lock-keepers during the early period of navigation apparently were never formally spelled out. The only description of their duties appears in the form of an order in the *Proceedings of the President and Board of Directors* on November 20, 1830:

That each Lock-Keeper be supplied with such tools as may be necessary for the preservation and repair of that portion of the Canal under his care: that receipts be taken from the Lock-Keepers for the tools delivered to them, to be filed with the Clerk of the Company; and that the Superintendent make monthly report to the Board of the condition of all such tools and the condition of the Lock-Keeper's houses and other property of the Company under his inspection: And it was further ordered, that an inventory be made of all tools etc. now belonging to the Company, from which to supply the Lock-Keepers as far as practicable.⁴

¹ *Second Annual Report* (1830), C & O Co., 32, and *Third Annual Report* (1831), C & O Co., 4–5.

² Benjamin Wright, the chief engineer of the canal company since its formation in 1828, resigned his position on October 1, primarily because the legal difficulties with the Baltimore and Ohio Railroad would prevent active engineering operations above Point of Rocks for an indefinite period. His position was abolished and was replaced by the two residencies. As part of the reorganization, the former 1st and 2nd Residencies were combined into the new 1st Residency while the former 3rd, 4th and 5th Residencies were united into the new 2nd Residency. The reorganization was ordered by the board of directors as a means of reducing the engineering staff and company payroll costs pending a final resolution of the legal conflict with the railroad. *Proceedings of the President and Board of Directors*, B, 171–173.

³ *Proceedings of the President and Board of Directors*, B, 173–174.

⁴ *Ibid.*, B, 225. While there is little information on the specific maintenance duties of the lock tenders, there is some indication that the navigable portion of the waterway was divided into "lock-keeper districts." For instance, the directors on July 1, 1831, extended the "authority of the District Lock-keeper at Rushville" so "as to enable him to regulate under the authority of the Superintendent, at the levels between Locks Nos. 21 and 22." *Ibid.*, B, 397.

**II: FIRST FORMAL DEVELOPMENT OF GUIDELINES
FOR MANAGEMENT OF CANAL MAINTENANCE ACTIVITIES: 1831**

The absence of formally defined regulations for the navigation and the management of the line of the canal soon presented serious problems to Superintendent Van Slyke and the lock tenders. On April 2, 1831, Van Slyke reported to the directors on the chaotic state of operations on the waterway:

The canal has been so thronged with boats since the opening of the navigation on the 19th March last that it is with great difficulty we have been able to preserve order among the Boatmen, who in striving to push forward for a preference in passing the several locks are sometimes disposed to injure each others boats as a means of carrying their point....It would seem important that some rule be adopted by the Board to govern the Lock Keepers, so that the boats may pass the locks by turn as they arrive, as it frequently occurs that fifteen or twenty boats arrive at a lock within half an hour. Hence the contention for right of preference, which I believe would be allayed if it was known that they must be permitted to pass only by turn as they arrive.⁵

After discussing the remarks by Van Slyke, the directors on May 6 authorized President Charles F. Mercer “to prepare and cause to be published, a code of Regulations for the government of the lock-keepers, boat-men, packet owners and others having business on the Canal.”⁶ On July 16 the board amended and approved the “Regulations for Navigating the Chesapeake & Ohio Canal,” the “Rules for the Collection of Tolls on the Chesapeake & Ohio Canal,” and the “Distribution of the Chesapeake & Ohio Canal for the Purposes of Navigation, Inspection, and Repairs, into Lock-keepers Districts,” all of which Mercer had submitted⁷ The latter set of regulations not only defined the location of the lock-tenders’ districts but it also provided the first formally-written description of their duties as follows:

**DISTRIBUTION OF THE CHESAPEAKE & OHIO CANAL,
FOR THE PURPOSES OF NAVIGATION, INSPECTION,
AND REPAIRS, INTO LOCK KEEPERS DISTRICTS.**

The first Lock-keeper’s District shall extend from the eastern termination of the Canal in Washington, to the waste weir next above the old locks at the Little Falls of Potomac, and shall include the basin between Georgetown and Washington, as well as those locks.

The second Lock-keeper’s District shall extend from the first, as high up as to include the waste weir next above the United States powder magazine, and shall also include the dam and feeder at the Little Falls.

The third Lock-keeper’s District shall extend from the second, to the lower end of the external slope of protection wall next above the culvert over Cabin John Run.

The fourth Lock-keeper’s District shall extend from the third district, to the first culvert above his dwelling house.

The fifth Lock-keeper’s District shall extend from the fourth, to the waste weir through the berm of the canal next below the entrance of the Rocky Run Feeder.

⁵ Van Slyke to Mercer, April 2, 1831, Ltrs. Recd., C & O Co.

⁶ *Proceedings of the President and Board of Directors*, B, 314.

⁷ *Ibid.*, B, 410–428.

The sixth Lock-keeper's District shall extend from the fifth, to the lower end of the first high vertical protection wall above, and shall embrace Rock Run Dam and Feeder.

The seventh Lock-keeper's District shall extend from the sixth to the lower end of the first external slope or protection wall above the Great Falls of Potomac.

The eighth Lock-keeper's District shall extend from the seventh, to the first high bluff above the culvert over Watt's branch.

The ninth Lock-keeper's District shall extend from the eighth, to the lower end of the first external slope or protection wall above the culvert over Muddy Branch.

The tenth Lock-keeper's District shall extend from the ninth, to the upper end of the external slope or protection wall next above the Seneca Aqueduct.

The Lock-keeper of the First District will have charge of the Tide lock, the four lift locks next above the same, and the locks at the Little Falls, with three assistants, one of whom shall live at the lock house near the old locks and attend the same.

The Lock-keeper of the second District will have charge of two locks, with one assistant, who shall live at the lock house, which he himself does not occupy.

The Lock-keeper of the fifth District will have charge of three locks, with one assistant, who shall live at the lock house which he himself does not occupy.

The Lock-keeper of the sixth District will have charge of three locks, with one assistant.

The Lock-keeper of the seventh District will have charge of six locks, with two assistants, one of whom shall live at the lowest lock house on the District, and the other at the lock house next to his own.

The Lock-keeper of the tenth District will have charge of the Seneca Guard, and two lift locks, and be required to keep one assistant till the Canal above Seneca be brought into use, and after that, two assistants; one of whom shall live at the lock house near the Seneca Aqueduct.

The Several District Lock-keepers, and their assistants, will have charge of all the Company's works and property of every description within, or appertaining to the part of the Canal within their respective districts, and will be held responsible for the due care and preservation thereof, from all damages, trespasses, and injuries, and for keeping in order the grounds, fences, &c. about their locks and houses.

The District lock-keepers will appoint, and pay their own assistants; they will themselves be appointed by the President of the Company, on his nomination, approved by the Board of Directors, and will be removable at his discretion, or that of any two Directors of the Board, in the absence of the President.

All orders will be given them, either by, or through the President of the Company, the Superintendent of repairs, or some equally authorized officer, or engineer of the Company, and they will be held responsible for the prompt, diligent, and faithful execution thereof.

Their ordinary standing duties will be as follows:

To attend constantly and diligently by day and night, to the filling and emptying of the lock or locks, within their respective districts, and the passage of all boats or floats, through the same, according the general regulations of the President and Directors, and to such further or particular instructions as they may hereafter receive, in relation thereto.

They shall never absent themselves from their districts, but by special leave of the President of the Company, or of the Superintendent of repairs, except in cases of unavoidable necessity and in cases of this description they shall always leave some safe and trusty substitute to supply their places until their return.

The District Lock-keepers, are constituted inspectors of the Canal, and its various appurtenances, and of the Company's grounds and property within their respective districts. As such, they are required personally to examine or ascertain, by their assistants, the actual condition of all the works and property of the Company within their respective districts, once at least in every week; and when practicable, once at least every other day. In doing so, they shall carefully examine the several locks, aqueducts, culverts, waste weirs, bridges, dams, embankments, slopes, and walls committed to their care; and once every month they shall report in writing, to the Board, through the Superintendent of repairs, the condition of the same, and the number of visits they have made; if any damage or injury has been sustained by any of the said works since the last monthly report, the nature, extent, and scope thereof, and of any to be apprehended, the grounds of such apprehension.

If a District Lock-keeper shall, at any time, discover, that any of the works on the Canal, within his district, are out of repair, he shall immediately report the fact in person or by express, which, for that purpose, he is authorized to hire, to the Superintendent of repairs, and if from the nature of the repairs required, or of the damage apprehended, time be not allowed without farther injury to the Canal or its appurtenances, to wait the orders of the Superintendent, the Lock-keeper shall consider himself empowered, and he is required, at the cost of the Company, to take immediate steps, in the absence of the Superintendent, to repair the injury which has happened, or to prevent that which is apprehended. Of all expenses so incurred by him, for the benefit of the Company, he shall keep a fair account, a copy of which, he shall hand over to the Superintendent, as soon as his presence shall enable him to take charge of such repairs, the Superintendent shall repay to the Lock-keeper, the sums so expended. All such accounts shall be settled as soon as practicable, after they arise, and, at least, once in every month.

No Lock-keeper shall be entitled to receive his monthly pay, who shall have an unsettled account with the Company.

The District Lock-keepers shall be bound, if required, to provide by themselves, or their assistants, accommodation and subsistence, at a reasonable rate, not to exceed a given sum per week, for the Superintendent; and such hands or laborers as may be engaged in such repairs, or on any improvements upon, or alterations of the Canal.

Each Lock-keeper and Lock-keeper's assistant shall be furnished with 2 wheelbarrows, 3 shovels, a pick and a crow-bar, to be used in the improvement and repair of the Canal, whenever required, and shall be held responsible for the good order and safe keeping of the same; and each District Lock-keeper, in his monthly return to the board, shall state the number and condition of the tools within his District.

In addition to his monthly pay, each District Lock-keeper, shall be entitled to an enclosed lot, near his house.

Every Lock-keeper shall be at liberty, subject to the restraints and regulations of the existing laws, to accommodate the boatmen, and other travelers at his lock house, provided that under no circumstances whatever, shall any Lock-keeper, or his assistant, be allowed to sell or to supply on any terms, to any boatmen, traveler, or other person, any spirituous, or intoxicating liquor, or to allow the use or consumption of any such liquor within or upon his premises; unless particularly authorized so to do by the President and Directors of the Company; and for any violation of this rule, the offender shall be immediately discharged from the service of the Company.

In like manner any District or Assistant Lock-keeper, who shall at any time be found in a state of intoxication, shall be forthwith discharged.

Every District Lock-keeper, and his assistant, shall afford to the boatmen and all other persons navigating the canal, every aid and accommodation in his power, while he duly enforces the regulations for the protection of the Canal and its works—he shall instruct the boatmen how to navigate the Canal, to the best advantage, and especially to what part of their boat they should attach their tow or tracking line; how to track it with most comfort to themselves, and especially the manner of entering and passing out of the locks, and the use of their bow and stern strapping or snubbing ropes.

Every District Lock-keeper having reason to suspect a boat or float to have increased her cargo subsequent to the date of her waybill, is authorized to call upon the owner, master, or other person having charge of said boat or float for a sight of his waybill, to compare with the actual cargo of such boat, and if any augmentation of such cargo shall appear to have been made, subsequently to the date of the permit or waybill, to endorse a notice hereof, on such waybill, for the information of the Collector, and the other Lock-keepers.

All boats or floats left by their owners, or such persons as may have had charge thereof, either sunk in the canal or loosely floating thereupon, and all floating logs, planks or branches of trees, as well as other nuisances within the Canal, the Lock-keeper of the district within which the same may be, shall promptly cause to be removed or abated.

Every District Lock-keeper is required to pay particular attention to the orders regulating the height of water in the several levels between the locks of his district; and the Lock-keepers of the eighth and ninth districts, may be required to receive their orders through the Lock-keepers of the seventh or of the tenth district; and in like manner those of the second, third, and fourth, through the Lock-keepers of the first or fifth district.

In all cases, where practicable, the various levels shall be regulated by the use of the wastes and feeders of the Canal, reserving the side culverts and paddle gates of the locks for their appropriate use – that of filling and emptying the locks when required by the passage of boats.

Each District Lock-keeper shall see that obvious and suitable marks, by description stones or boards, be kept up, above and below each lock, to denote where a boat approaching the same, shall slacken its speed or await its turn for entering the Lock, if other boats have a right to precede it.

No Lock-keeper is authorized to practice himself, or to countenance others, in resisting, by violence, except in self-defense, any outrageous or disorderly conduct on the canal, but he shall take, at the cost of the Company, prompt measures to suppress and punish the same, by the judicial tribunals having cognizance thereof.⁸

Although there was no mention of repair work crews in the company regulations, such laborers were hired on an “as-needed basis” and placed under the direction of the superintendent. One of the earliest extant payrolls in the canal company records indicates that during the period from February 1 to March 1, 1832, 137 laborers were making improvements and repairing breaches, embankments and culverts on the navigable portion of the canal preparatory to its opening for boats in the spring. The number of days worked by the men varied from 1 to 26½ days during that month at wages varying between 25 cents and \$1 a day. Some 233½ “man-days” of work were performed by the hands boarded by the company on its “boarding-house” boat. The men who

⁸ *Ibid*, B, 422 - 428. On July 22, 1831, the canal from Dam No. 1 to Dam No. 2 was declared “open and free for trade and passing, subject to the Regulations of the Company.” Water was not admitted into the canal all the way to the Georgetown tidelock until September 19, 1831. *Ibid*, B, 432, C, 5.

were boarded at the expense of the company received 40 cents or less per day, while the remainder of the men who supplied their own board and lodging were paid 65 cents or more per day.⁹

On March 24 Superintendent James C. Lackland, who had replaced the sickly Van Slyke on July 1, 1831, was authorized by the directors to perform two duties to upgrade the effectiveness of the regular maintenance activities on the canal. The two assignments were as follows:

That the Superintendent do examine the several lock-keepers with a view to ascertain those that are acquainted with the extent of their respective districts and the various duties required of them, by the printed or other regulations, and orders of the President and Directors; and that he report to the President of the Company, the name of every lock-keeper, whom he shall find, upon examination, to be ignorant of his duty or in any way negligent or remiss in its performance; that he especially instruct the said lock-keepers to inspect, as required, the embankments on both sides of the Canal, within their respective districts in order to ascertain whether any leak exists or is threatened in any part thereof; whether any muskrats have made lodgments therein, and if any, the entrance of their habitations; and that he instruct them in their daily or weekly inspections, and take special care in his own, to pass thro' the several viaducts or culverts of the canal within their district and under his superintendence . . . or . . . by looking thro' the same, whether any leak exists thereon, and that, where any such leaks are discovered, they be promptly stopped, or effectual measures be taken to prevent their enlargement. . . .

That a reward of 25 cents be paid by the superintendent, and charged by him in his periodical settlement of accounts, for every muskrat, which he shall have satisfactory evidence has been killed on the Canal, in the embankments thereof or on the river side adjacent thereto.¹⁰

Preventive maintenance became an issue in June 1833 when the board ordered Superintendent William H. Bryan to inform the lock-keepers that they were to enforce rigidly the regulations prohibiting the navigation of iron-pointed scows and the use of iron-pointed poles.¹¹ In the future, each tender would be responsible for the damage done to his locks by such boats and poles unless it could be proven that an effort had been made to enforce the regulations or that violations had been reported immediately to the Collector at Georgetown. Unless such efforts could be proven, the cost of repairs to the locks could be deducted from the monthly wages of the lock-keepers. To give effect to this provision, the superintendent was directed to certify that the locks were in good order each month before the tenders were paid.¹²

⁹ *Miscellaneous Accounts and Other Records Concerning Construction and Maintenance, 1828–1882*, C & O Co. There is no documentary information on the “boarding House” boat. However, the board purchased the *Lafayette* from Charles Embrey of Williamsport for \$300 in January 1833. The *Lafayette* was fitted for the accommodation of hands employed by the canal superintendent. *Proceedings of the President and Board of Directors*, C, 263–264, 278.

¹⁰ *Ibid.*, B, 393, 454, C, 111–112. A similar effort to pay bounties for muskrats killed along the canal was revived for a short period in 1870.

¹¹ On June 1, 1832m John Y. Young was appointed as superintendent of the canal at a salary of \$750 per year in place of Lackland who was retiring because of ill health. Sometime early in 1833, William H. Bryan superseded Young as superintendent. *Proceedings of the President and Board of Directors*, C, 139, 154, 357.

¹² *Ibid.*, C, 368–369, 392. Later in June 1836, the board directed the superintendent to notify the lock tenders that they would be held responsible for all damages to their districts which resulted from the neglect of duty. *Ibid.*, E, 69.

III. ESTABLISHMENT OF NEW MANAGEMENT DIVISIONS TO ACCOMMODATE WESTWARD EXPANSION OF CANAL: 1833–1839.

In October 1833 the board took steps to provide for the supervision of the new section of the Canal between Dams Nos. 2 and 3 which was to be watered later in the month. Charles B. Fisk, who had been employed as an engineer on the waterway since September 30, 1828, was appointed as the superintendent for the division at a salary of \$500 in addition to his pay as an engineer.¹³

The years between 1834 and 1835 witnessed significant progress in the construction of the waterway and the consequent realignment of management responsibilities for the maintenance of the canal. After Tidelock B was completed in September 1834, the First Lock-Keeper's District was extended to include the entire portion of the canal works from that lock to the Little Falls. This stretch of the canal was placed under the responsibility of the tender at Locks Nos. 1–4 who was also serving as the Collector of Tolls at Georgetown. He was to employ assistant lock tenders to operate the locks and to make the necessary inspections and repairs of the line.¹⁴

In December 1834 the canal between Dams Nos. 3 and 4 was completed and watered. To provide for the supervision of this line of the canal the board extended the authority of Fisk's superintendence to include the newly-opened portions. His first duties were to appoint temporary lock-keepers and to erect shanties in which they could live.¹⁵

The canal between Dams Nos. 4 and 5 was opened to navigation by early July 1835 when the board of directors proceeded up the canal in their iron Opacket to examine the status of the completed and projected portions of the waterway. While they were in Williamsport on July 13, the directors appointed George W. Rodgers as the assistant engineer and superintendent of the canal from Harpers Ferry to Dam No. 5 at a salary of \$1,000 per year. At the same time, the portion of the canal below Dam No. 3 was divided into two superintendencies. John Y. Young was to oversee the waterway from Georgetown to Edwards Ferry, while William S. Elgin was to be responsible for the line between Edwards ferry and Dam No. 3.¹⁶

In April 1839 the section of the canal between Dams Nos. 5 and 6 was completed and watered. This section of the waterway was established as the fourth division with John G. Stone as superintendent. At this time new salary scales were adopted whereby Young and Elgin received an annual salary of \$1,000 while Rogers and Stone were paid \$1,200.¹⁷

¹³ *Ibid.*, C, 436, D, 1.

¹⁴ *Ibid.*, D, 181.

¹⁵ *Ibid.*, D, 199.

¹⁶ *Ibid.*, D, 366, E, 161.

¹⁷ *Ibid.*, F, 38, and *Twelfth Annual Report* (1840), C & O Co., 38–39. In April 1837 Fisk had been promoted to Chief Engineer with supervisory responsibilities over both the construction engineers and the division superintendents.

IV. POLITICAL INFLUENCE AND THE MANAGEMENT OF CANAL MAINTENANCE ACTIVITIES: 1840–1841

A disputed contest in Maryland state politics erupted in 1837 and 1838 between the rising Democrats and the entrenched Whig coalition that had been in power, with a few exceptions, for many years. The political unrest resulted in constitutional amendments providing for the popular election of the governor and the Senate and abolition of the Governor's Council. The electoral reforms paved the way for the election of William Grason as the first Democratic governor in 1838. The momentum gained by the Democrats in his election enabled them to win a majority in the House of Delegates the following year.¹⁸

The new Grason administration in Annapolis soon took steps to apply the Jacksonian-inspired spoils system to the operation of the canal. In the first large turnover of company employees, many long-time and reliable Whig-appointed officials were dismissed or voluntarily retired under pressure and were replaced by generally less-experienced and more politically motivated Democrats. In June 1839, the respected George C. Washington, who had been president of the company since 1834 and had done much to promote additional subscriptions to canal stock by the state legislature, was replaced by Francis Thomas, Jr., who had been a Democratic Congressman since 1831 from Frederick County and was destined to succeed Grason as governor of the State in 1841.¹⁹ Following an abortive attempt to move the company headquarters to Baltimore in June 1839, the board of directors ordered its removal to Frederick in June 1840.²⁰ Among the canal officials who were fired or resigned between May and November 1840 were the following:

- May 7—Joseph Hollman replaces John G. Stone as Superintendent of 4th Division.
- May 7—William Mathews replaces William H. Bryan as Commissioner.
- July 9—John D. Grove replaces George W. Rodgers as Superintendent of 3rd Division.
- July 9—John P. Ingle resigns as Clerk and is replaced by Thomas Turner.
- Sep. 17—William O'Neale replaces William S. Elgin as Superintendent of 2nd Division.
- Sep. 26—Chief Engineer and Principal Assistant Engineer positions combined and filled by Ellwood Morris; Charles B. Fisk fired.
- Nov. 14—Samuel Lyles replaces Robert Barnard as Treasurer and Accountant.
- Nov. 14—Edward Shriver replaces Thomas Fillebroun, Jr., as Assistant Clerk.
- Nov. 14—Ezra Houck appointed Collector General to supervise all toll collectors.²¹

The wholesale changes attracted considerable public notice as the ousted officials carried into the newspapers their opposition to the directorate and other observers expressed their opinions on the separations. In commenting on the resignation of Clerk John P. Ingle, the *National Intelligencer* observed:

¹⁸ Richard Walsh and William Lloyd Fox, eds., *Maryland: A History, 1632–1974* (Baltimore, 1974), 279–280.

¹⁹ *Proceedings of the Stockholders*, E, 347–348; *Proceedings of the President and Board of Directors*, F, 75–76; *Niles' Register*, (LVIII (July 4, 1840), 278–281; and *Biographical Directory of the American Congress, 1774–1971* (Washington, 1971), 1805, 1886. Under the direction of Thomas, it was determined to continue construction of the hard-pressed waterway on the basis of the unrestricted issuance of scrip. The decision was highly unpopular with the fiscal conservatism of the Whig-appointed officials and thus played a role in some of the resignations.

²⁰ *Proceedings of the President and Board of Directors*, F, 76, 82, 234.

²¹ *Proceedings of the President and Board of Directors*, F, 246–247, 256–257, 259–260, and Ingle to Stone, May 7, 1840, Ingle to Bryan, May 7, 1840, Turner to Schnebly, August 12, 1840, and Turner to Elgin and to O'Neale, September 17, 1840, Ltrs. Sent, C & O Co.

The company will miss the services of Mr. Ingle much, especially if it is intended, as some suppose, to force also the other experienced officers of the company out of its service.²²

After the Whigs won a majority of seats in the House of Delegates in the 1840 elections, the new legislature demanded explanations of the canal board's conduct of company affairs.²³ Following the release of a report by President Thomas to Governor Grason in which it was admitted that some canal officials had been removed for "political opinion's sake," the stockholders met on April 2, 1841, to oust the directorate. A special stockholder's committee reported that from all available evidence it was:

satisfied that very valuable and faithful officers have been removed from the service of the Company, and, in some cases, men not competent to perform the duties have been appointed in their places, to the serious injury of the best interests of the Company.²⁴

As the controlling stockholder, the State of Maryland on April 2 replaced the Thomas-led board with a predominantly Whig directorate headed by Michael S. Sprigg who had held a variety of company offices in previous years.²⁵ The new board proceeded to reinstate as many of the old officials as were still available and to reform canal affairs. Among the returning officials were William S. Elgin, George W. Rodgers, and John C. Stone as Superintendents of the 2nd, 3rd, and 4th Divisions, respectively, and Charles B. Fisk as Chief Engineer, along with ten of his former assistants.²⁶ A resolution was adopted forbidding company officials from interfering in politics, and a copy of the resolution was sent to every one of the nearly 60 permanent canal employees.²⁷

²² Washington *National Intelligencer* quoted in *Niles' Register*, LVIII (July 18, 1840), 308.

²³ *Proceedings of the President and Board of Directors*, F, 279, 284.

²⁴ *Proceedings of the Stockholders*, B, 417–419.

²⁵ *Proceedings of the President and Board of Directors*, F, 301–302.

²⁶ Turner to O'Neale, Elgin, Hollman, Stone, Grove, and Rodgers, April 15, 1841, Ltrs. Sent, C & O Co. and Morris to Sprigg, April 7, 1841, and Fisk to President and Directors, April 29, 1841, Ltrs. Recd., C & O Co.

²⁷ *Proceedings of the President and Board of Directors*, F, 315.

V. FLUCTUATIONS IN MANAGEMENT OF CANAL MAINTENANCE ACTIVITIES DUE TO DESPERATE COMPANY FINANCES: 1842–1850

By 1842 the financial condition of the canal company was desperate and construction between Dam No. 6 and Cumberland had come to a halt.²⁸ Accordingly, steps were taken to reduce the number of canal employees and management positions and the company's overhead costs to operate and maintain the waterway. One scheme that was attempted in December 1842 by Superintendent Young was in an effort to reduce repair costs on the 1st Division was that of contracting for the hire of Negro slave work gangs.²⁹ In June 1843 the board of directors instructed Young to reside at Seneca and to function as the tender at Lock No. 23 and Guard Lock No. 2 in addition to his supervisory duties.³⁰

Upon the recommendation of Chief Engineer Fisk, the board of directors on May 25, 1844, reduced the number of divisions on the navigable portion of the canal from four to three. The new divisional alignment was as follows:

- 1st Division—Eastern terminus to Edwards Ferry River Lock—32 miles—John Y. Young, Superintendent
- 2nd Division—Lock No. 25 to 500 feet above head of Guard Lock No. 4—54.8 miles—William S. Elgin, Superintendent.
- 3rd Division—Point 500 feet above head of Guard Lock No. 4 to current western terminus at Dam No. 6—48.5 miles—John G. Stone, Superintendent.

The superintendents, each of whom received an annual salary of \$800, were directly responsible for the supervision of the collectors, lock tenders and repair crews on their divisions.³¹

Another reduction in the number of divisions was made in June 1845 following the resignation of Superintendent Young. At first, the directors agreed to reduce the length of the 1st Division only to cover the distance from the eastern terminus to and including the Little Falls Feeder and Guard Lock No. 1. John Moore, the newly appointed superintendent of this division, would receive \$60 per year. The canal from Guard Lock No. 1 to the Edwards Ferry River Lock would be added to the 2nd Division under Elgin for which increased responsibility he would receive an additional annual stipend of \$300. When Moore declined the offered position "at the compensation fixed," the entire 1st and 2nd Divisions were combined under Elgin for which service he was to be paid \$1,200 per year.³² This arrangement, according to the report of President James M. Coale, reduced the operating expenses of the waterway and provided for more "efficient attention to the canal and its works."³³

A special committee of the stockholders issued a report in July 1846 on the inadequacies of the system of managing the operation and maintenance of the canal. Recently, there had been numerous complaints about the incompetency and neglect of some of the lock-keepers that was contributing to the detention of trade and the necessity for costly repairs at various places. The committee conceded that the 135-mile length of the canal was difficult to supervise. It noted the widely-held belief that many grievances were kept quiet because the local people tended to frown on informers. As the board was far away from the canal and only met monthly, the investigations

²⁸ *Niles' Register*, LVX (September 9, 1843), 19 and *Ibid*, LXII (March 26, 1842), 52.

²⁹ *Proceedings of the President and Board of Directors*, F, 513.

³⁰ *Ibid*, G, 44. At the same time, Superintendent George W. Rodgers was ordered to reside in Williamsport "or at some other more central part of his division, but upon the line of the canal."

³¹ *Ibid*, G, 165 and *Seventeenth Annual Report* (1845), C & O Co., 9–10.

³² *Proceedings of the President and Board of Directors*, G, 244–245, 249.

³³ *Seventeenth Annual Report* (1845), 4.

of reported problems often took place long after the fact and allowed the tender to cover their actions. Moreover, the lock-keepers generally refused to cooperate with or respect the superintendents who had little authority to enforce their orders. To alleviate these problems, the committee recommended that the tenders be made directly responsible to the superintendents who would in turn be held accountable for all negligence and dereliction of duty. The number of divisional superintendents should be increased to three, and they should be placed under the direction of the chief engineer who would assume the title of general superintendent.³⁴

Some portions of the committee's report were adopted by the board in December 1846 when Chief Engineer Fisk was ordered to lay the canal out into three divisions. In February 1847 the directors approved Fisk's divisional boundaries as follows:

- 1st Division—Tidelock B at the mouth of Tyber Creek in Washington to and including the Dam No. 2 complex.
- 2nd Division—Dam No. 2 complex to near and above Guard Lock No. 4.
- 3rd Division—Near and above Guard Lock No. 4 to Dam No. 6.

John Lambie, a highly-recommended citizen of Washington County was appointed as Superintendent of the 1st Division at an annual salary of \$700, while Elgin and Stone were retained on the 2nd and 3rd Divisions, respectively, each at annual salaries of \$900.³⁵

President Coale explained the recent changes in canal management to the stockholders in June 1847 by observing:

The past year...has been one of peculiar trial to the Company and of labor and anxiety to the subordinate officers on the several divisions of the line. In no former year in the recollection of any one connected with the Company have so many freshets occurred and of such general magnitude. Admonished by its results, and with a view of guarding the Canal against injury by every reasonable precaution which it is in our power to provide, the Board...laid off the line into three divisions, in such a manner as in their opinion would be best calculated to insure the utmost amount of personal supervision on the part of the Superintendents. . .³⁶

³⁴ *Proceedings of the Stockholders*, C, 592–594.

³⁵ *Proceedings of the President and Board of Directors*, G, 475–477, H, 1–2. In August 1847 the company headquarters was moved back to Frederick from Cumberland where it had been located for several years. This more central location would be more convenient and accessible to all portions of the navigable portion of the canal, and thus would provide for more efficient management of the line. *Ibid*, H, 18–19, 67, 69.

³⁶ *Nineteenth Annual Report* (1847), C & O Co., 6–7.

VI. ADOPTION OF NEW BY-LAWS AND ORGANIZATIONAL ALIGNMENT TO MANAGE MAINTENANCE ON THE COMPLETED CANAL: 1850–1851

The construction of the canal between Dam No. 6 and Cumberland was completed in the fall of 1850. On October 10 festive ceremonies were held at Cumberland to formally open trade on the waterway to that city. From that date until the winter weather closed the canal to navigation for the season, the recently-completed portion of the waterway was designated as the 4th Division. Fifteen tenders were appointed to operate the locks on the division, but no superintendent was named.³⁷

In November 1850 the board of directors adopted a six-division alignment for the “superintendence of the repairs” which was to take effect on January 1, 1851. The names and boundaries of the divisions, which were laid out by Chief Engineer Fisk, were as follows:

- 1st—Georgetown Division—Eastern terminus to Seneca Feeder, inclusive.
- 2nd—Monocacy Division—Above Seneca Feeder to Dam No. 3 Feeder, inclusive.
- 3rd—Antietam Division—Above Dam No. 3 Feeder to point 500 feet above Guard Lock No. 4.
- 4th—Williamsport Division—Point 500 feet above Guard Lock No. 4 to first stop lock below Licking Creek.
- 5th—Hancock Division—Above first stop lock below Licking Creek to Lock No. 59.
- 6th—Cumberland Division—Above Lock No. 59 to western terminus at Cumberland.³⁸

On April 1, 1851, new “by-laws, rules, and regulations” for the officers of the company were put into effect by the board. According to the by-laws, the officers connected with the management and preservation of the canal and the collection of tolls were as follows:

1. General Superintendent
2. Superintendent of Repairs
3. Lock-keepers
4. Collectors
5. Acting Collectors
6. Inspectors

The by-laws included general regulations and position descriptions for the officers which remained in effect with slight modifications until 1889 when the canal went into a receivership:

GENERAL REGULATIONS

- 103. They shall give their personal and constant attention to the duties of their respective offices, and shall not be directly or indirectly concerned in any store, shop, or other trading establishment for the purchase or sale of spirits, produce, merchandise, or property of any description, on or near the line of the Canal, or have directly or indirectly an interest

³⁷ *Report to the Stockholders on the Completion of the Chesapeake & Ohio Canal to Cumberland* (Frederick, 1851), 140.

³⁸ *Proceedings of the President and Board of Directors*, H, 391–391. Later, the following individuals were named as the division superintendents: John Lambie, Georgetown; William S. Elgin, Monocacy; Levin Benton, Antietam; John G. Stone, Williamsport; Overton G. Lowe, Hancock; and Henry M. Dungan, Cumberland.

in any boat running upon the Canal, or have any other employment or occupation without the special permission of the President and Directors; under the penalty of being dismissed from service.

104. It shall be their duty to preserve and take care of all books, papers, vouchers, maps, documents, instruments, tools, and other property of the Company, which may come into their possession; and every such officer or agent, leaving the service of the Company, shall surrender up and deliver over to his successor, or other person duly authorized to receive the same, all the books, papers, vouchers, maps, documents and instruments pertaining to his office and all other things whatever, the property of the Company, which may be in his control.

105. No officer of the Canal shall either directly or indirectly be interested in any contract for labor, materials, provisions, implements, or other thing connected with the construction, improvements, repairs or expenses of the Canal or its appurtenant works; and no officer shall either directly or indirectly derive any benefit from the annual expenditures on the Canal beyond his established compensation.

GENERAL SUPERINTENDENT

106. The General Superintendent shall have the general management and direction of all repairs and improvements of the Canal, that may, that from time to time, be required. He shall give general directions and instructions to the Superintendents of repairs, in regard to the manner of making and carrying on the ordinary repairs, and special directions and instructions in regard to all those not of an ordinary character, and in regard to all improvements.

107. He shall, so far as practicable, personally examine all breaches,—particularly those that will take more than one week for their repair,—and shall give special directions and instructions to the Superintendents of repairs in regard to the manner in which they shall be repaired.

108. He shall, as often as practicable, examine the accounts of the Superintendents of repairs, to ascertain whether economy is observed in the doing of the work entrusted to their management; and may, if he think it advisable, at any time, require that their accounts and vouchers for disbursements shall be transmitted through him, to the Canal office.

109. He may, if he think it advisable, require that all reports and returns made by any or all of the Superintendents of repairs to the office of the Company, shall be transmitted through him; and in like manner that all communications to them, from the office of the Company, shall be transmitted through him.

110. He may, if he deem it necessary, suspend any Superintendent or Lock-keeper and fill the vacancy thereby created, until the next meeting of the President and Directors, at which time, he shall report to the said President and Directors, such suspension and temporary appointment, with his reasons therefore and the facts of the case.

111. In the case of the death, resignation or removal of any Superintendent or Lock-keeper, he shall nominate for appointment by the President and Directors, some suitable person to fill the vacancy; and, if he deem it necessary, may temporarily fill the vacancy until such appointment is made.

112. He shall personally inspect and examine the Canal and all its structures, every six months, and, also, after any high fresh in the Potomac that does serious injury to the Canal; and shall, after every such inspection and examination, make a full report thereof to the President and Directors.

113. He shall, in his semi-annual reports, required by the last regulation, sum up and classify the expenses and cost of maintenance of the Canal, during the six months next preceding, shall give a condensed account of the operations in his department since the last preceding semi-annual report, and shall recommend whatever he may think necessary to promote the interest of the Company so far as it is dependent upon the condition in which the Canal is kept.

114. He shall, from time to time, make such other reports, and shall perform such other duties as the President and Directors may require and prescribe.

SUPERINTENDENTS OF REPAIRS

115. It shall be the duty of each Superintendent of repairs, under general or special directions and instructions from the General Superintendent, to superintend and direct the repairs and improvements of the Canal on his division, and to do every thing in his power to preserve said Canal, and the works connected therewith, from injury, and to keep them in a good state and condition; for which purpose he shall be allowed such bosses or foremen, removable at his pleasure, each with such force of laborers, and governed by such regulations, as the General Superintendent may prescribe; and he is particularly charged with the duty of seeing that the bosses or foremen and laborers under his charge shall be diligent and faithful in the performance of their respective duties to the Company.

116. He shall have charge of all the boats, horses, tools, implements, and other personal property of the Company on his division, and shall cause all such property, not in use, to be kept in a place of safety; and at the close of each quarter shall return, through the General Superintendent, to the office of the Company, to be placed on file, an inventory of all such property under his charge.

117. He shall purchase, under such regulations as the General Superintendent may deem proper and prescribe, provisions, materials, implements and tools, needed for the execution and prosecution of the work under his charge.

118. He shall visit the whole length of his division as often as the General Superintendent may require; and shall keep the General Superintendent constantly informed, of the state and condition of the line under his charge, and of all other matters under his superintendence; and at the close of each quarter, and oftener if required, he shall make report to the General Superintendent, of the state and condition of the Canal under his charge, and its appurtenant works, as also of the houses and enclosures of the lock-keepers; including in such report what injuries the Canal has sustained since the last preceding report and the

cases thereof; what measures he may have taken or may think necessary to guard against similar injuries in future; what depredations or encroachments may have been committed on the Canal or its works or other property of the Company; and such other information as he may consider important to its interests.

119. On the occurrence, on his division, of any breach in the Canal, or other injury to its works, suspending the navigation, he shall immediately proceed to the same, remain thereat, and superintend the repairs thereof, until the navigation shall be restored. He shall, also, as soon as practicable, and from time to time as he may be able, report to the General Superintendent, in writing, the occurrence of such breach or injury, with the place, time, causes, extent, and descriptions thereof, the means adopted or proposed to be adopted by him for repairing the same, the time which will probably be occupied by such repairs, their probable cost, and all other information in his power relative to that subject, which may be useful or interesting. He shall also apprise the several Collectors of such breach or other injury, and of the time at which the navigation will probably be restored; and shall send similar information to the office of the Company.

120. He shall superintend and direct the Lock-keepers, on his division, in the performance of their duties, and report the misconduct of any Lock-keeper to the General Superintendent.

121. He shall by the 20th of each month send, in such form as shall be prescribed, through the General Superintendent, to the Clerk of the Company, an estimate of the probable amount of the expenses of the month, on his division, for repairs and maintenance of the Canal.

122. He shall, by the 20th of each month, send to the Treasurer of the Company, his account of payments for the preceding month accompanied by the requisite vouchers.

123. He shall, under no circumstances whatever, take a receipt for labor done, services performed, or materials, provisions, implements, or tools purchased for the Company, unless the money for the same shall have been actually paid.

124. He shall, by the 10th of each month, send to the Clerk of the Company, through the General Superintendent, a statement of the fines imposed on his division, during the preceding month. In this statement shall be fully and particularly given and set forth, in each case, the name or names of the person or persons on whom the fine was imposed; the nature of the offence; by whom the fine was imposed; and whether the same has been paid or not; and if the offence was committed by the owner or master of any boat or float, or by any person employed thereon or assisting in the management thereof, the name of such boat or float shall also be given.

125. He shall, at the close of each month, obtain from the acting Collectors on his division, and from such Collectors as he may be instructed to do, accurate returns of all way-bills and permits *issued* and *received* by them during the month,—also, the way-bills and permits *received*,—and shall transmit the said returns and the said way-bills and permits *received*, to the Clerk of the Company, by the 10th of the succeeding month.

126. The money that he shall receive under the 135th, 154th and 155th regulations, for fines imposed and tolls collected,—also that he may himself receive for fines imposed, shall be held in such manner or deposited in such place to the credit of the Company, as may be from time to time directed and prescribed.

127. The Superintendent of repairs shall perform such other duties in addition to those already enumerated, as the President and Directors or General Superintendent shall from time to time assign to them.

LOCK-KEEPERS

128. It shall be the duty of all lock-keepers to make a daily and particular inspection of the locks under their charge, and of any other works which they may be directed, by order of the General Superintendent or of the Superintendent of repairs on whose division they are, to attend to; and to prevent by all lawful means within their power, any injury to said locks or other works, from carelessness of boatmen or from malicious or disorderly persons.

129. They shall use their utmost exertions to keep the said locks or other works in the best possible order, and in case of any accident or injury to them, or to the Canal in the vicinity of their stations, requiring immediate attention, they shall take the necessary measures to remedy the same and to prevent further injury; and in the meantime to send the earliest intelligence thereof to the Superintendent of repairs on that part of the Canal.

130. It shall be their duty, at all hours, by night as well as by day, unless otherwise ordered by the General Superintendent or Superintendent of repairs on that part of the Canal, to pass all boats and floats presenting themselves at their locks, and entitled to pass the same under the regulations of the Company.

131. They shall not permit the boatmen to pass their boats or floats through any lock, except in the presence and under the direction of the keeper thereof or his assistant.

132. The Lock-keepers shall not absent themselves from their locks, on any occasion, without leave from the Superintendent of repairs on that part of the Canal. They shall reside in the houses provided for them, at their respective stations; and shall be charged with the care and preservation of their respective houses and of the enclosures attached thereto; and also any property of the Company that may be put in their keeping by the General Superintendent or the Superintendent of repairs on that part of the Canal; and for any injury to the said house or enclosures or the said property, if occasioned by their neglect or carelessness, they shall be, respectively, liable.

133. Lock-keepers, when repairs are making in the neighborhood of their locks, at points where, and at times when, there is difficulty in obtaining board and lodging for those persons employed upon such repairs, shall afford such accommodation, in the way of boarding and lodging, the whole or in part of the said persons, at fair and usual rates, as in the opinion of the Superintendent of repairs of that part of the Canal, he can reasonably and with propriety be asked and required to afford.

134. Although, under these regulations, the Lock-keepers are, in many cases, authorized to impose fines; yet, except in cases of emergency, it is desired that they should forthwith report each violation of a regulation to the Superintendent of repairs on that part of the Canal, with all the facts in the case, in order that the fine may be imposed by the said Superintendent; and that such other measures in relation to the said violation may be taken as in the judgment of the said Superintendent may be thought necessary.

135. All fines imposed by Lock-keepers shall be forthwith reported to the Superintendent of repairs on that part of the Canal; and all monies received by them for fines imposed by them shall be immediately paid over to the said Superintendent.

136. Any Lock-keeper who shall knowingly permit a boat to pass his lock in violation of any provision of these regulations; or who shall himself neglect or refuse to comply promptly, with any one of such of these regulations as prescribes his duties, either towards the Company or those engaged in boating on the Canal, shall be forthwith suspended from duty by the Superintendent of repairs on that part of the Canal, on his becoming cognizant of the facts; and a report of the case shall be immediately made to the General Superintendent, by the said Superintendent, for his action thereon; and in the meantime the said Superintendent may appoint some person to fill, temporarily, the vacancy thus created.

137. Every Lock-keeper shall perform such other duties connected with the Canal, as the General Superintendent may from time to time require of him.³⁹

In June 1851 the stockholders were informed about the early operation of the management of the canal under the new divisional alignment and the by-laws by President Sprigg as follows:

In conformity to the recommendation contained in a resolution passed at your last meeting, the board have appointed Charles B. Fisk, Esq., general superintendent of the canal, and has conferred upon him such authority over the subordinate officers on the line of the canal, as will, it is believed, give an efficient organization to this important branch of the service. In this connection, we would also state, that we have adopted a system of by-laws, rules, and regulations for the government, and prescribing the duties of the various officers connected with the management and preservation of the canal, and the collection of tolls. We have every reason to believe, as far as we can judge, from the short period which has elapsed since the by-laws of the company went into operation on the first of April last, that very beneficial results have, and will attend them; in the preservation of the works of the company, in securing a proper vigilance and subordination on the part of the officers on the line of the canal, and producing a degree of order and regularity on the part of those navigating the canal, which has heretofore not existed...⁴⁰

³⁹ *By-Laws, Rules, and Regulations; In Force on the Chesapeake & Ohio Canal, 1st April 1851* (Baltimore, 1894), 33–39. Since the duties of the collectors, acting collectors, and inspectors pertain more directly to the regulation of trade on the canal, their positions descriptions may be found in Chapter XII of this study.

⁴⁰ *Twenty-Third Annual Report* (1851), C & O Co., 3–4. In June 1851 it was determined to move the company headquarters from Frederick to the Washington City Hall. After the new office was established, the books and papers of the company were “simplified and arranged with such order and method, as have not before existed,” thus affording efficient reference to the affairs of the company and eliminating many of its earlier cumbersome management difficulties. *Proceedings of the President and Board of Directors*, H, 448–449, and *Twenty-Fourth Annual Report* (1852), C & O Co., 19.

VII. POLITICAL INFLUENCE DISRUPTS EFFICIENCY OF MANAGEMENT OF CANAL MAINTENANCE: 1852–1867

Hard on the heels of the destruction wrought by the April 1852 flood there was an equally devastating assault on the fortunes of the canal by political interference in its management and operation. In 1851 the Democrats had capitalized on the reapportioned legislative structure provided by the new constitution adopted that year to win decisive control over the General Assembly for the first time. At the annual meeting in June 1852, the controlling stockholder, the State of Maryland, acting through its representatives appointed a new administration for the company headed by ex-Democratic Governor William Grason as president. The dominance of the state in company affairs meant, in effect, that the political party in power in Maryland also controlled the selection of the canal board and indirectly the many subordinates on the line, thereby making the canal positions objects of party patronage. Canal positions had been used for party purposes once before in the early 1840s at which time there had been two successive sweeps of office, as the Democrats installed its political friends in 1840 and the Whigs promptly reinstated the older officials when they returned to power the following year. Thereafter, there had been no large-scale interference until 1851, primarily because the Whigs had maintained majorities in the General Assembly for most of this period while the Democrats had controlled the governorship except for an interlude in 1844–47. Now that the Democrats controlled both the executive and legislative branches of the state government, the Grason administration proceeded to revive the spoils system in the management of the canal, reaching all the way down to the lock-tenders and the repair crew bosses in the thoroughness of its sweep.⁴¹

As had been the case in the early 1840s many of the older and experienced canal officials were replaced by generally less competent political appointees. All of the division superintendents were fired with the exception of John Lambie of the Georgetown Division. The new superintendents were as follows:

Monocacy Division—William O’Neal, Jr.
Antietam Division—Charles Clarke
Williamsport Division—Benjamin F. Hollman
Hancock Division—James Condy
Cumberland Division—William P. Sterritt

In addition, the collectors at Williamsport and Cumberland were relieved of their jobs while the collector at Georgetown resigned. Perhaps, the most significant resignation was that of General Superintendent Fisk, who had served the company for some 24 years in a variety of engineering positions. In his stead, the board appointed Thomas L. Patterson at an annual salary of \$1,800.⁴²

Thereafter, more or less complete reorganizations reflecting the unsettled conditions in Maryland politics, occurred regularly until 1867 when the Democrats emerged as the dominant party of the state. As new boards succeeded the old ones, they promptly replaced their political enemies with party favorites. There was little or no concern for the welfare of the canal. The serious effects which the continued political interference had on the operation and the maintenance of the canal was later graphically described by a group of disgruntled bondholders in 1881:

In such way money was raised for completion of the Canal in 1850 [repair bonds of 1844], more than thirty years ago. And for two or three years the interest on the Bonds

⁴¹ Walsh and Fox, *Maryland*, 280, 295–297, 301, and Sanderlin, *Great National Project*, 208–209.

⁴² *Proceedings of the President and Board of Directors*, H, 537–541, 550–552, 556.

was promptly and punctually paid: a fact which was calculated to allay any anxiety that may have prevailed in the premises, and to appreciate the value of the Bonds on the markets.

The canal was thus under a stable, anti-political, and very able management, no changes having been made in its executives for seven years. But about this time the state made a change in the canal management, giving it into the hands of a political administration instead of the stable business control which had lifted it from the lowest stages of depression in 1840–1, 2 and 3, to completion and apparent prosperity in 1850.

Therefore [after 1850] as the State administration changed, so did the management of the canal, until about 1870, when it was ascertained that during the twenty years preceding there had been a dozen different administrations and executive heads in the management of this once popular and magnificent State Work. As an inevitable consequence of this too much-management the canal became a magnificent failure; transportation was uncertain; the big ditch was gradually filling up; the culverts were dilapidated; interest on the bonds was unpaid and largely in arrears; and the bonds themselves sunk in the market to a point below sale or quotation. . . . the State. . . by virtue of her ownership of five Eights of the Capital Stock, has had . . . the Exclusive Management, and has absolutely shaped and controlled the policy of the Company.

Administrating its affairs by officers chosen by her; changing those officers with every change of her politics; removing one year officials who had just begun to be familiar with the duties and responsibilities of their position . . . it is no wonder this Enterprise has languished. . . . Without a fixed and Stable policy; without a Corps of trained and Experienced officers; without Judicious and systematic Economy, paralyzed by perpetual Changes in its administration; the victim of abuses, Mismanagement and lavish Expenditures; its power and influence Constantly used in the Service of [the] political organization which, for the time, appointed its officers and regulated its direction. . .⁴³

In the autumn of 1853 the Democratic candidate for Governor, T. Watkins Ligon, was elected to replace the outgoing Democrat, Enoch Louis Lowe, while the Whigs recaptured both houses of the state legislature. As a result of these political developments, Samuel Hambleton was installed as the new canal president in June 1854 in place of Grason. The new board instituted several changes in the management of the line during the following year. In June 1855 the new management policies were explained to the stockholders:

Rigid rules were prescribed for the conduct of the superintendents upon the line of the canal. Weekly reports were required of them upon their respective divisions, which have since been regularly made to the office at this place [Washington]. Monthly reports were also enforced from the general superintendent; the good results of both which requirements have been manifested.

The Board deeming the continuance of the office of Engineer of the Company, at a salary of \$1,800 per annum, an unnecessary expense, as no repairs or construction requiring scientific plans and estimates were within the present means of the Company, abolished this office and substituted that of General Superintendent, with a salary of \$1,200 per annum, in its stead. The good results of this policy have been manifested to the Board. They secured the services of Mr. A. K. Stake upon the canal, whose practical

⁴³ "Memorial of Certain Bondholders of the Chesapeake & Ohio Canal Company to the Board of Public Works of Maryland," *Fifty-Third Annual Meeting* (1881), and *Proceedings of the Stockholders*, E, 340–341, 343.

knowledge of the canal, having been engaged upon it in various capacities for many years; his untiring energy in the service of the Company, passing twice a month over the greater part of the line, and his regular monthly reports in writing of its condition, were found to be far preferable to the results of the former office of Engineer. A rigid system of economy was ordered and enforced.⁴⁴

As part of the effort to reduce operating costs, the board recommended that the division superintendents sell the house boats which were used to lodge the repair crews and make arrangements for "room and board" for the men at lockhouses or private dwellings along the waterway. When it was found that such arrangements were difficult to make, the directors withdrew the recommendation.⁴⁵

On June 30, 1855, the Hambleton board ordered a small reorganization of personnel. The following officers and individuals were involved:

DIVISION SUPERINTENDENTS

Antietam—Charles Clarke replaced by Levin Benton
 Williamsport—Henry Artz replaced by Lewis G. Stanhope
 Hancock—James Condy replaced by Denton Jacques
 Cumberland—Asahel William replaced by Lloyd Lowe

COLLECTOR OF TOLLS

Williamsport—Charles Embry replaced by Ellie Stake
 Hancock—David E. Price replaced by Henry Wells.⁴⁶

Next the Hambleton board turned its attention to a reorganization of the company office. The separate offices of clerk and treasurer were combined, and an assistant clerk was hired in the place of an accountant whose office had been combined formerly with that of treasurer. These changes reportedly contributed to the efficient management of the company and provided an annual savings of \$300 in overhead expenses.

The stockholders were informed in June 1856 concerning the beneficial results of the newly-created office of clerk and treasurer held by W. S. Ringgold:

As the affairs of the Company are now necessarily managed by a President and Board of Directors who meet monthly, much of the responsibility devolves upon this confidential officer, in the intermediate periods of meeting; great familiarity with the past records and affairs of the Company, with its present condition and resources; with the routine of duty and reports from superintendents and employees on the line of the canal; prompt intelligent and vigorous action is required, in the absence of the President and Directors, and other reasons readily suggesting themselves, will show the high qualities required on this officer.

The insuring to the Company increased usefulness and devotion in this office on the part of the present Clerk and Treasurer, alone swayed the Board in the change of organization above mentioned.

The stockholders were also told of the valuable service of General Superintendent Stake:

⁴⁴ Twenty-Seventh Annual Report (1855), C & O Co., 3–4.

⁴⁵ Proceedings of the President and Board of Directors, I, 103–104.

⁴⁶ Proceedings of the President and Board of Directors, I, 181.

I [Hambleton] feel it a duty to bear testimony to the great energy and devotion of the general Superintendent of the canal to the duties of his station; his great familiarity with every department of the work, resulting from his long previous business connections with it;—his industry and known intelligence;—his special weekly personal attendance on the line to his duties;—his regular and accurate reports, have all been a source of great satisfaction to the Board for the past two years.⁴⁷

As a result of the statewide elections in the autumn of 1855, the American Party, which was the offspring of the nativist Know Nothing Movement, gained control of the House of Delegates and had sufficient strength, with the cooperation from a few of the sympathetic Whig holdovers, to organize the Senate as well.⁴⁸ The victorious Americans proceeded to remove the Hambleton board in June 1856 and replace it with a new set of directors headed by William P. Maulsby as president. Within a month the new board ordered a thorough reorganization of both the management of the line and the company office. The six divisions were reduced to four, and the general superintendent and the division superintendents were replaced by new appointees. Moreover, the authority of the general superintendent was diminished to the extent that the division superintendents were made directly responsible to the directors. The boundaries and superintendents of the four new divisions were:

Georgetown Division: Eastern terminus to Conrad's Ferry; James P. Wade, Superintendent.

Monocacy Division: Conrad's Ferry to Dam No. 4; Charles Clarke, Superintendent

Hancock Division: Dam No. 4 to Dam No. 6; Denton Oliver, Superintendent

Cumberland Division: Dam No. 6 to Dam No. 8; Richard M. Sprigg, Superintendent

Dewalt Stottlemyer was named as the new general superintendent.⁴⁹

President Maulsby presented the rationale for this reorganization to the annual meeting of the stockholders in June 1857. According to his report, when the board had been selected in the previous June

it adopted the conclusion that the true policy . . . was to reduce, as far as possible, the number of officers on the line of the Canal, and to require from those remaining increased activity and attention. . . It was thought that the entire time and attention of the six Division Superintendents had not been occupied, and perhaps could not be profitably occupied, in the discharge of their official duties, and it was deemed wise, so to apportion the number to the duties to be discharged, as to leave to the incumbents no unoccupied time. Accordingly the Board determined to reduce the number from six to four, reserving for the future action a further reduction, if experience should demonstrate its propriety.

Maulsby went on to cite the reasons for diminishing the authority of the general superintendent and making the division superintendents directly responsible to the board by observing that the

several grades of officers, and consequent degrees of responsibility each to the other, actually interfered with, rather than promoted, the prompt and efficient making such repairs

⁴⁷ *Twenty-Eighth Annual Report* (1856), C & O Co., 11–12.

⁴⁸ Walsh and Fox, *Maryland*, 314–315.

⁴⁹ *Proceedings of the President and Board of Directors*, I, 277–283.

as are constantly needed to keep the Canal in order, and which to be effectual must be, when needed, quickly done.—The work actually done on the line is by, and under the immediate supervision of, the Bosses. These being responsible to, must wait form in theory at least, and too frequently in practice when not really necessary, the directions of the Division Superintendent. The Division Superintendent, being responsible to the General Superintendent, and not amenable for a failure to make repairs, except such as, and when, ordered by the General Superintendent, might wait for the directions of that officer; and thus it did occur that the whole trade on the Canal, at a period not remote, was suspended for several days because of the breaking of the beam of a Lock-gate, which might have been repaired in a few hours; (the means being offered by a gentleman residing adjacent to the spot,) but was not done until the employees of the several grades could meet and consult each other, and obtain the authority, professed at all events to be, deemed requisite. This circumstance is mentioned but as an instance illustrating too general a habit. The members of the Board saw, on their own inspection, that repairs were not made with the promptness which they deemed due to the interests dependent on the Chesapeake & Ohio Canal, and in their attempts to trace out the cause they found themselves involved in a maze of uncertainty, the ultimate responsibility generally resting where a charge of manifest negligence could not well be sustained against the individual officer, altho' the interests mentioned were not the less sorely suffering; and by the way of relieving the difficulty, to an extent at least, they abolished the office of General Superintendent, thus making the Division Superintendent responsible directly to the Board. An incidental result of this action has been a saving to the Company of Three Thousand Two Hundred and Fifty Dollars—Two Division Superintendents at \$900.00 each, and the General Superintendent at \$1200.00 for salary and \$250.00 an allowance made by a former board for his traveling expenses—although the primary object in this reduction of officers was, not a reduction of expenses, but a promotion of efficiency. So well satisfied had the Board been with the effect of its action in this respect, that whatever change shall hereafter be made should, in its opinion, consist in further reduction of the number of Superintendents, and if need be an increase of salaries to those retained, rather than in an increase in the number of officers. A regulation heretofore adopted prohibits any Superintendent from engaging in or attending to any other occupation whatever; and although the present Board has earnestly striven to enforce it, and although it believes that it has succeeded to some greater extent than was the case prior to its efforts, yet it thinks with regret that the success has not been perfect, and that efforts to that end should not be surceased until they shall have attained perfect success. The mighty interests, connected with and dependent on the management of the Canal, demand that each individual, who shall consent to take on himself a part of so weighty a responsibility, shall surrender to the duty each mental and physical energy with which he may be endowed, and that a dereliction of duty in this regard can hardly be too harshly characterized.

Maulsby concluded his remarks on the new management apparatus of the company by describing the changes in the central office:

The Board felt itself constrained by the supposed requirement of the intent of the Charter of the Company to rescind the action of its Predecessors, and to separate the discharge of the duties of Treasurer from those of the Clerk, and accordingly elected Samuel M. Magraw Esq., Treasurer, and re-elected W. S. Ringgold Esq., Clerk. It was at the same time felt that the change could not with propriety be accomplished at an increased cost to the Company, in its then and now financial condition, and accordingly the salaries lately paid

to the Clerk and Treasurer, and a subordinate Clerk—\$2800.00—were divided, and \$1400.00 fixed as the salary of each officer, Clerk and Treasurer. In this connection the Board asks leave to say, that such increase in the net revenues of the Company at no distant period is anticipated, as will justify the payment to the Clerk of a salary better apportioned to the labor, skill and devotion which the invaluable officer now occupying that position, daily brings to the complete discharge of the duties imposed upon him.⁵⁰

In the hotly-contested statewide elections in the fall of 1857 the American Party maintained its control of the state legislature and its nominee for Governor, Thomas H. Hicks, won the state-house.⁵¹ On March 18, 1858, the canal company stockholders met and, at the direction of the Hicks administration, elected a new board of directors headed by Lawrence J. Brengle as president.⁵² The new board quickly set to work reorganizing the management of the company. The office of engineer was abolished and replaced by the office of engineer and general manager with an annual salary of \$1,500. John G. Stone, a former division superintendent, was appointed to fill the position. The old six-division alignment was restored and most of the former superintendents were returned to their positions:

Georgetown Division: Eastern terminus to Seneca Feeder; Horace Benton, Superintendent

Monocacy Division: Seneca Feeder to Dam No. 3 Feeder; Silas Browning, Superintendent

Antietam Division: Dam No. 3 Feeder to Guard Lock No. 4; Levin Benton, Superintendent

Williamsport Division: Guard Lock No. 4 to Guard Lock No. 5; Andrew M. Stake, Superintendent

Hancock Division: Guard Lock No. 5 to foot of Lock No. 58; Lewis G. Stanhope, Superintendent

Cumberland Division: Lock No. 58 to Western Terminus; Lloyd Lowe, Superintendent.

The board approved the following resolution relative to the duties and performance of the division superintendents and the general superintendent:

That it shall be the duty of the division Superintendents to devote their whole time, and give their undivided attention to the care and management of their respective divisions; and that it be the duty of the General Superintendent to see that they comply with the provisions of this order.

Among other personnel changes were the appointment of three new collectors at Williamsport, Hancock and Cumberland, and a new Inspector of Cargos at Georgetown, and 44 new lock tenders. The old office of treasurer and accountant was reestablished and given to Henry W. Hoff-

⁵⁰ *Twenty-Ninth Annual Report* (1857), C & O Co., 3–5.

⁵¹ Walsh and Fox, *Maryland*, 324–326.

⁵² Since the election of a new board was usually held at the annual meeting of stockholders in June, Maulsby complained that the election was illegal and that his board should be entitled to hold office until June. He submitted the question to the company counsel for a legal opinion but was overruled. Angered by his abrupt dismissal, Maulsby locked the vault containing the books and papers of the company and locked the door to his office and took the possession of the keys. *Proceedings of the President and Board of Directors*, K, 1–4.

man, an American Party Congressman from Western Maryland who had just been defeated in his bid for reelection.⁵³

In June 1858 President Brengle reported to the stockholders concerning the recent changes in the management of the canal:

The [Maulsby] board immediately preceding the present board, on assuming the direction of the affairs of the Company, proceeded at once to change the organization which had existed on the line of the Canal since its completion to Cumberland, by removing, in the first place the General Superintendent and all six division Superintendents, who were all experienced, well tried men, and had long been connected with the Canal; then, reduced the Superintendencies from six to four, and appointed a General Superintendent and four division Superintendents, to these responsible positions, who, with a single exception, had hitherto never been connected with the Canal, and as we are informed, had no experience or knowledge of such duties as pertained to their stations.

In a few months thereafter, the office of General Superintendent was abolished, thus leaving the whole line of the Canal of 186 miles under the direction of four division Superintendents, without experience themselves, without the immediate direction and control of an experienced head, and with no general system of management. To this mistaken policy chiefly, we think, can be attributed the disasters which have occurred [at Dams Nos. 4–5].

The present board, believing that past experience justified the course, have restored the former organization of the line of the Canal, by establishing six divisions; and with two exceptions have appointed the former experienced Superintendents of divisions. We have also appointed John G. Stone, Esq., Engineer and General Superintendent, who was long connected with the canal in former years; and it is believed from his experience, energy and capacity, that he will render very efficient services in this station.

With this organization on the line of the Canal, it is confidently hoped that renewed energy, vigor and economy, will be experienced in the management of the work, and that it will result in a more reliable, and less interrupted navigation of the Canal, than has existed for the past two years.⁵⁴

Capitalizing on the collapse of the American Party and utilizing the heightened negrophobia following John Brown's Raid on Harpers Ferry, the Democrats secured control of the Maryland General Assembly in the November 1859 elections.⁵⁵ At a special meeting of the canal stockholders in May 1860 a new board of directors was selected with James Fitzpatrick as president. The following day ex-American Party Congressman Hoffman resigned from his position as treasurer and accountant and was replaced by John M. Miller.

A committee composed of the president and three of the newly-elected directors was asked to review the management system of the canal and to make recommendations for its improvement. In its report on May 16 the committee observed:

that in their judgment the existing arrangement of six superintendents having control and management has proved utterly inefficient and unworthy of further reliance. Therefore they would respectfully recommend that the entire line of the canal be divided into sixteen supervisorships in distance regulated as nearly as possible to the condition of the ca-

⁵³ *Ibid.*, K, 1–10, 13–16, 18–19.

⁵⁴ *Thirteenth-Annual Report* (1858), C & O Co., 3–4.

⁵⁵ Walsh and Fox, *Maryland*, 329–330.

nal at the several points along its entire length; and that on each of such divisions one supervisor be employed at fifty dollars per month, and that each supervisor shall be subject to, and under the control of the President and Directors...and the General Superintendent in the employment of the Company....⁵⁶

The canal board quickly adopted the recommendations contained in the report with several accompanying amendments. The number of supervisorships was increased to eighteen and the salaries of the supervisors were raised to \$55 per month. The directors then proceeded to fire and abolish the positions of the six division superintendents and their repair crews bosses, after which the eighteen supervisors were appointed to districts whose boundaries were determined by General Superintendent Stake:

Isaac R. Maus—Tidelock B to Magazine
Joshua W. Offutt—Magazine to Lock No. 22.
George W. Spates—Lock No. 22 to Edwards Ferry
John A. Dade—Edwards Ferry to Monocacy Basin
John Short—Monocacy Basin to Berlin
John T. O'Bryne—Berlin to Dam No. 3
P. C. Savin—Dam No. 3 to Aqueduct No. 4
Lawson Puffenberger—Aqueduct No. 4 to Lock No. 40
George W. Grove—Lock No. 40 to Guard Lock No. 4
W. P. McCarell—Guard Lock No. 4 to Lock No. 44
Thomas Charlton—Lock No. 44 to Lock No 45 (including dam and feeder)
Emanuel Tice—Lock No. 45 to Aqueduct No. 6
B. B. Boatman—Aqueduct No. 6 to Lock No. 53
Lawrence Murray—Lock No. 53 to Dam No. 6
John McLaughlin—Dam No. 6 to Lock No. 61
Frederick Kasekamp—Lock No. 61 to Lock No. 67
Thomas Sammon—Lock No. 67 to Lock No. 73
David Wineow—Lock No. 73 to Cumberland

Among the other personnel changes were the appointment of new employees to fill the following positions: inspector of cargos at Georgetown; watch at Paw Paw Tunnel; collectors at Georgetown, Williamsport, Hancock and Cumberland; 47 lock tenders; superintendent of boats at Georgetown; and paymaster.⁵⁷

President Fitzpatrick offered a lengthy rationale for the new system of management to the stockholders at their annual meeting in June, 1860:

⁵⁶ *Proceedings of the President and Board of Directors*, K, 177–178, 183. Under the Brengle administration, the canal company had experienced such desperate financial problems that it had been forced to pay the lock tenders and repair crews with certificates of indebtedness. So serious was the financial condition of the company that even President Brengle went unpaid for a period of months. *Ibid*, K, 147–148; 219.

⁵⁷ *Ibid*, K, 182–186, 192–195, and *Thirty-Second Annual Report* (1860), C & O Co., 16–19. Before the eighteen new supervisors began their work on June 1, General Superintendent Stake provided them with general instructions which required them

to devote their entire time and attention to the Canal, to prevent breaches or other interruptions, if possible, to repair them promptly, assist each other promptly, carry out the By-Laws, send information about interruptions to the different Collector's Offices, and pay strict attention to the portion of Canal under their charge, etc.

The present Board of Directors, deeply impressed with the magnitude of the trust confided to their charge, and anxious to realize the just expectations of all persons connected in interest with the prosperity of the Canal, to prevent in future those disastrous interruptions of its navigation, which have prostrated the business of important portions of the State, and to restore confidence to all great interests involved in its fate, gave their earliest attention, at their very first meeting, to the whole system of management heretofore adopted on it, and made such alterations, as in their judgment, will remove evils that have been so deeply felt and so justly complained of.

They have reduced the management to a rigid, responsible, practical and economical system. They have abolished the offices of Division Superintendents, which they considered were disbursing agents, and substituted for them, eighteen Bosses or Supervisors, each of whom will have charge of a certain number of miles, ranging in extent according to the condition of the work, as some parts of the Canal require more vigilance and labor to repair and preserve it in navigable order for five miles, than other parts will be for fifteen. The Board retained the office of General Superintendent, and that officer, who is familiar with the condition and wants of every mile of the Canal, will assign their respective divisions to the eighteen Supervisors, but no distance will exceed fifteen miles. Under the old system of Superintendents, there were sixteen Bosses, who received liberal pay and who really discharged all the valuable and responsible duties on their respective divisions. By abolishing the Superintendents and elevating the Bosses to power and direct responsibility, the valuable part of the old system is developed into the most efficient usefulness.

The Board entertains well grounded confidence, that the operation of this system, which went into effect on the first instant [June], will prove beneficial to the work and to all persons interested in its prosperity. By it the entire Canal is placed under the daily personal examination of vigilant officers who have been selected with reference to their industry and fitness, and whose duty it will be to take charge of the men employed under them, labor with them, and give their whole time and undivided attention to that part of the work allotted to their respective care and supervision. Each of them will be immediately responsible to the Board for the condition of his division, the whole of which he can examine every day in person, and prevent, by timely attention, those breaks which have so frequently occurred from neglect and the absence of that watchfulness, which should guard every portion of a work, upon the uninterrupted navigation of which the welfare of so many depends. It will be strongly impressed upon them, that negligence, incompetency or dereliction of duty, will be promptly visited with the forfeiture of their places, and that no man will remain in the service, who will not give practical proofs of his competency and fidelity in the discharge of the duties, which, by accepting the position, he assumed to perform. The interests involved are too numerous and important to admit the idea of retaining men in places who are not willing and able to labor skillfully and untiringly to establish and maintain its prosperity and usefulness on a permanent basis.

While this alteration is confidently expected to introduce vigor and promptness in the working of the Canal, no additional expense had been incurred in its adoption.

Six Superintendents received each \$900 per year,	\$5,400
Sixteen Bosses under them received each \$450 per year	\$7,200
	\$12,600
Eighteen Supervisors will now receive \$660 per year	\$11,880
Showing difference in favor of the new system of:	\$720

To this must be added the salary of a paymaster [James Condy], whose duty will be to pass over the entire line monthly and pay off all the employees of the Company and take their receipts in person. The Board considers the appointment of a paymaster indispensable to the perfection and accuracy of the system they are endeavoring to inaugurate. For many and obvious reasons the paying department of the service should be distinct and separate from those who control the labor and provide the necessary supplies of various materials. The Supervisors will have but one duty to perform—the preserve their respective divisions in navigable and good repair, and from that, nothing but unavoidable casualties will excuse them.⁵⁸

The statewide elections in the fall of 1861 were held under the cloud of the Civil War. The Union Party, in its own right but fortified by the presence of the Federal military, won large majorities in both houses of the General Assembly as well as the governorship with Augustus W. Bradford as candidate. The election was significant in that it virtually ended any hope for pro-Southern elements to gain control in the state.⁵⁹

The state Unionist forces lost little time in reorganizing the management machinery and personnel of the canal company. On January 30, 1862, Alfred Spates, a rising Allegany County Democrat who had been elected as president of the company the previous year, was reconfirmed in his office.⁶⁰ At a board meeting on February 12 the directors abolished the fourteen supervisorships and determined to restore the former six division management system. The new divisions and superintendents were:

- Georgetown Division: Tidelock B to Lock No. 23 (inclusive); Horace Benton, Superintendent
- Monocacy Division: Lock No. 23 to Guard Lock No. 3 (inclusive); John Caneron, Superintendent
- Antietam Division: Guard Lock No. 3 to Guard Lock No. 4 (inclusive); Levin Benton, Superintendent
- Williamsport Division: Guard Lock No. 4 to Guard Lock No. 5 (inclusive); Jacob B. Masters, Superintendent
- Hancock Division: Guard Lock No. 5 to Guard Lock No. 6 (inclusive); Thomas Hassett, Superintendent
- Cumberland Division: Guard Lock No. 6 to Guard Lock No. 8 (inclusive); Lloyd Lowe, Superintendent

Other changes were also made in the management and personnel of the company. The office of treasurer and accountant was abolished and replaced by the combination of the offices of clerk and treasurer into one position and an assistant clerk. The four collectors at Georgetown, Williamsport, Hancock and Cumberland were replaced, and 21 new lock tenders were appointed.⁶¹

⁵⁸ *Thirty-Second Annual Report* (1860), 3–5. Later in December 1860, the supervisorships of John Short, George W. Grove, Emanuel Trice and Thomas Sammon were abolished and incorporated into the fourteen remaining subdivisions. *Proceedings of the President and Board of Directors*, K, 232.

⁵⁹ Walsh and Fox, *Maryland*, 354–355.

⁶⁰ *Proceedings of the President and Board of Directors*, K, 250–253. Immediately following the election of Spates, General Superintendent Stake had resigned his position. Ringgold to Stake, July 10, 1861, Ltrs. Sent, C & O Co.

⁶¹ . *Proceedings of the President and Board of Directors*, K, 272–277, 282. Apparently the position of general superintendent was not filled; thus, the division superintendents were directly responsible to the board.

President Spates notified the stockholders in June 1862 that the former system of management had been restored to the canal. His justification for the reorganization was as follows:

Two years ago a change was made in the supervision of the line of the canal, by the appointment of eighteen supervisors and a paymaster, in place of six superintendents of divisions as had previously existed (with occasional change in the number,) since the canal was opened for navigation. It was supposed that this would be more efficient and less expensive than the former system. After a brief trial it was found otherwise, and that a divided responsibility, want of regularity and system, without satisfactory checks and responsibility for payments made, rendered the change not only less efficient and satisfactory, but more expensive. The present Board have therefore restored the former system of management by the appointment of six experienced and efficient superintendents of divisions, who will make the disbursements on the line of the Canal under proper regulations, and thus dispense with a paymaster. Some other changes in the emphasis of the Company have been made, without detriment to the efficiency of the service, and by these various reforms, effecting an annual reduction in the expenses of the Company of about \$8,000.⁶²

After receiving reports that some superintendents were neglecting their duties, the board established a new policy to govern their conduct. In December 1862 the following order was approved and distributed to each superintendent:

That the several Supts. of the Canal be required to conform themselves strictly to the rules and regulations of the Company, that said Supts. be required to pass over the entire length of their respective divisions at least once a week, and to report to the Clerk of the Company, and also to the Collectors of Tolls at Georgetown and Cumberland, whenever any interruptions of the navigation shall occur, and how long such interruption will continue; that they also be required to make monthly reports to the Board of the conditions of their respective divisions, and that any carelessness on their part in the performance of these duties will be deemed cause for their removal from office.⁶³

In the elections held in the fall of 1864, the Unionist coalition, dominated by its Radical wing since 1862, maintained control of the state legislature. Nevertheless, the emergence of a powerful Conservative force within the coalition was manifested by the election of Thomas Swann as governor. Encouraged by the gubernatorial victory, the Conservatives began a campaign to wrest control of the Unionist movement from the Radicals. With the collapse of the Confederacy in April 1865, the Radicals were left in a state of disarray as support for the war, which had been a cohesive core for the Union Party, was now gone and could no longer be used to submerge divisive issues in the coalition.⁶⁴

At the annual meeting of the stockholders in July 1865 the Swann administration pushed through the election of Jacob Snively as company president in place of Alfred Spates.⁶⁵ The new president and directors appear to have made few alterations in the system of management of the

⁶² *Thirty-Fourth Annual Report* (1862), C & O Co., 5.

⁶³ *Proceedings of the President and Board of Directors*, K, 315. In April 1864 the board authorized salary increases for the division superintendents, repair crew bosses and lock tenders. The superintendents' annual pay was set at \$1,000, while the monthly wages of the bosses were put at \$45. In October 1864 the superintendent of the Georgetown Division was authorized to hire a harbor master for the regulation of boats in Georgetown at a monthly salary of \$45. *Ibid*, K, 383, 402.

⁶⁴ Walsh and Fox, *Maryland*, 381–382.

⁶⁵ *Proceedings of the President and Board of Directors*, K, 431.

canal. One change that was made was the reestablishment of the position of engineer and general superintendent in December 1865. To this position the directors named Charles P. Manning, a noted civil engineer who had earlier been employed to examine and report on the condition of the canal and the repairs and improvements needed to restore it to its prewar operating condition.⁶⁶ In November 1866 John Cameron was removed as superintendent of the Georgetown Division and replaced by Isaac R. Maus.⁶⁷

⁶⁶ *Proceedings of the President and Board of Directors*, K, 465. Later in September 1866, the board dispensed with the services of Manning and again abolished the position. Ringgold to Manning, September 10, 1866, Ltrs. Recd., C & O Co.

⁶⁷ *Proceedings of the President and Board of Directors*, K, 526.

**VIII.: MANAGEMENT OF CANAL MAINTENANCE ACTIVITIES
UNDER THE HEGEMONY OF THE STATE DEMOCRATIC PARTY: 1867–1889**

By 1867 Maryland's period of "Self-Reconstruction" has come to an end and a more stable party alignment had emerged. In that year the ascendant Democrats pushed through the adoption of a state constitution and captured control of the governorship and the state legislature. Out of the political flux of the previous fifteen years, the Democrats—now augmented by Conservative Unionists, new voters, and returning veterans—became the dominant party in Maryland and would remain so into the twentieth century. Hence the canal management was no longer subject to the political whims resulting from the frequent shifts of power in Annapolis but was solely an instrument of Democratic patronage in Western Maryland.⁶⁸

In August 1867, several months prior to the November elections, the company stockholders elected Alfred Spates, a long-time Democrat, to a second term as canal president as support for Jacob Snively, who had replaced Spates in 1865, had evaporated along with the Unionist cause. The new Spates administration made few changes in the overall machinery or personnel in the management of the waterway. The only significant change occurred in July 1868 when the number of divisions was increased from six to seven by the creation of a new Seneca Division out of portions of the Georgetown and Monocacy Divisions as follows:

- Georgetown Division: Tidelock B to Lock No. 21 (inclusive)
- Seneca Division: Lock No. 21 to Lock No. 26 (inclusive)
- Monocacy Division: Lock No. 26 to Dam No. 3 (inclusive)

George W. Spates and Amos Thomas were appointed as the new superintendents of the Seneca and Monocacy Divisions, respectively.⁶⁹

Following reports of financial embezzlement and other fiscal irregularities on the part of President Alfred Spates and Superintendent George W. Spates, the stockholders elected Josiah Gordon to the company presidency in June 1869. Upon the recommendation of Arthur Pue Gorman, a rising political star in the emerging Democratic machine in Annapolis who was serving his first year in office both as a member of the canal board and the House of Delegates, the directors employed William R. Hutton, a well-known civil engineer, to serve as the canal's engineer and general superintendent and Sydney I. Wailes as paymaster. The latter was hired to breakup the reported corrupt system of money management that had been perpetrated by several division superintendents under the Spates presidency. An investigation revealed how the former officials had embezzled large sums of company funds for their own purposes:

The time of the laborers and mechanics, under the system of working on the Canal, was kept by the bosses, and returned to the Superintendents. The Superintendents then returned it upon their abstracts to the Board, and received the amount from the Treasurer, which they professed to pay, according to their return. But we found, by comparing the

⁶⁸ Walsh and Fox, *Maryland*, 389–392. There are numerous references in the canal company records to the use of the waterway as a tool of Democratic patronage in Western Maryland. Among these are the following: Gillease to Clarke, October 13, 1871, Blackford to Clarke, December 20, 1871, Hill to Gorman, August 9, 1872, Duvall, Gannon & Duvall to Fawcett, June 5, 1873, Shay to President and Directors, October 8, 1873, Michael to President and Directors, November 25, 1873, Hawkin to Gorman, February 15, 1875, Biser to Fawcett, August 6, 1875, Prettyman to Gorman, November 7, 1876, Pope to Fawcett, December 8, 1876, Polk to Gorman, March 16, 1877 and Peter to Fawcett, April 10, 1878, Ltrs. Recd., C & O Co.

⁶⁹ *Proceedings of the President and Board of Directors*, L, 104. Earlier in May the board had replaced the harbor master at Georgetown and the tender at Locks Nos. 1–4 with its own appointees. *Ibid.*, L, 94.

bosses' time books and the abstracts of the Superintendents, that there were very large discrepancies between them, and that a great deal more money had been drawn by two of the Superintendents than had been returned by the bosses, or paid to the laborers under their charge. These two Superintendents have ceased to be officers of the Company.

Although the salaries of Hutton and Wailes added considerably to the expenses of the company, the activities of both men in streamlining the management of the canal more than paid for their employment. In fact, the savings on the Seneca Division alone were enough to pay the salaries of both men. All told, it was announced in June 1870 that the new management policies reduced the bills of expenses submitted by the superintendents by some \$8,757 over the sums of the preceding year.⁷⁰

The Gorman-dominated board was also responsible for two other decisions that had a significant impact on the management of the waterway. In July 1869 the company office was moved to Annapolis, thereby signifying the close affiliation of the company's affairs with the political interests of the state Democratic machine.⁷¹

On May 4, 1870, Engineer Hutton submitted a plan for the complete reorganization of the line that he claimed would save the cost-conscious board nearly \$12,000 in annual salary expenses. According to the proposed plan, the seven divisions would be reduced to five as follows:

- 1st Division: Tidelock B to and including Dam No. 2 and Guard Lock—23.4 miles
- 2nd Division: Dam No. 2 to Dam No. 3 and Lock No. 35—40.2 miles
- 3rd Division: Lock No. 35 to upper end of Big Slackwater at tail of Lock No. 41—26.6 miles
- 4th Division: Lock no 41 to Lock No. 55 and Dam No. 6—45.2 miles
- 5th Division: Dam No. 6 to Dam No. 8—50.4 miles

The number of bosses and repair crews on each division was to be as follows:

- 1st Division: Two bosses and sets of hands
- 2nd Division: Three bosses and sets of hands
- 3rd Division: Three bosses and sets of hands
- 4th Division: Four bosses and sets of hands, the bosses on leaky sections to have a larger number of hands
- 5th Division: Three bosses and twenty men as at present.

The number of hands to be employed under each boss was not to be maintained at a fixed standard, but rather was to vary according to the work needs. One carpenter shop would be required on each division, with the exception of the fifth which would have two, and each shop would employ from 2 to 4 carpenters. The proposed plan would save the annual salaries of the following positions:

2 Superintendents	\$2,000
3 Bosses	\$1,620
2 (or 3) Horses	\$600
Estimated 12 men @ \$260	\$4,320

⁷⁰ *Forty-Second Annual Report* (1870), C & O Co., 8, 15, and *Proceedings of the President and Board of Directors*, L, 180.

⁷¹ *Proceedings of the President and Board of Directors*, L, 167–168, 182.

3 Cooks at \$216	\$648
3 Carpenters (estimated @ \$750)	<u>\$2,250</u>
	\$11,938

Additional savings would also be made in the costs for fuel and lights, the maintenance of houses and work scows, and the expense of furniture. As the lock tenders were being overworked because of the increasing canal traffic, they were to receive higher wages so that they could hire one assistant for each lock under their jurisdiction.⁷²

The canal board enthusiastically adopted the Hutton report, but before it could be put into effect a new board headed by James C. Clarke as president was installed in June 1870.⁷³ The following month the new directors voted to implement the Hutton plan on August 1. The superintendents of the divisions were appointed as follows:

- 1st Division (Georgetown)—Isaac R. Maus
- 2nd Division (Monocacy)—Amos Thomas
- 3rd Division (Antietam)—John Shay
- 4th Division (Hancock)—Denton Jacques
- 5th Division (Cumberland)—Edward Mulvaney

The offices of general superintendent and paymaster were abolished, and President Clarke assumed the responsibilities of those jobs, for which he was placed under a \$50,000 bond for the faithful discharge" of the "trusts committed to him." In October it was determined to move the company office from Annapolis to Hagerstown so that the directors would be more accessible to the employees on the line of the waterway. All of the changes were made, according to Clarke in his report to the stockholders in June 1871, "to introduce more system, and greater discipline in the service than heretofore existed" and to secure "greater economy by holding to a more rigid accountability the officers and employees in [the] discharge of their duties."⁷⁴

Two property inventories survive from the 1870 reorganization which indicates the quantity and types of tools, supplies and provisions that were kept aboard a repair crew's house-boat on the former Seneca Division and those that were under the immediate control of the division's superintendent. The house-boat inventory was made because the vessel was transferred from the former Seneca Division to the Georgetown Division to enable Superintendent Maus to house his men while working in the Georgetown area. Up to this time, repair crews had been housed at a local tavern while working in Georgetown at a cost to the company exceeding the 50 cents per day charged the laborers by the canal directors for their room and board. The property inventory of the Seneca Division was made because almost all of its length was transferred to the new Monocacy Division in the reorganization.⁷⁵

⁷² *Forty-Second Annual Report* (1870), 48–50.

⁷³ The Hutton recommendation relative to the salary increases for the lock tenders was put into effect on May 6. Each tender of a single lock was to be paid \$50 per month, while each lock keeper of two locks was to receive \$75 per month. The single lock tenders were to hire one assistant and the double lock-keepers were to employ two assistants subject to the approval of the division superintendent. *Proceedings of the President and Board of Directors*, L, 314–315.

⁷⁴ *Forty-Third Annual Report* (1871), C & O Co., 8; *Forty-Fourth Annual Report* (1872), C & O Co., 10–11; and *Proceedings of the President and Board of Directors*, L, 338–339, 349, 369, 393.

⁷⁵ Hutton to Clarke, August 3, 1870, Ltrs. Recd., C & O Co. The inventories may be seen in Appendices A and B. A cursory look at the company ledgers during the 1870s indicates that the company usually made a profit from the collection of the 50-cent daily charge from each laborer for room and board. For instance, the company realized a net gain of \$1,144.32 from January to July 1870 between the amount collected and

The Clarke administration took a number of steps to up-grade the quality of the repair-maintenance work on the canal as well as the productive capacity of the work crews. In June 1871 the wages of journeymen carpenters were increased by 25 cents a day to a total daily rate of \$2.50.⁷⁶ Two months later, a decaying packet boat lying idle at Cumberland was refurbished and converted into a repair crew house-boat.⁷⁷ With trade reaching record levels every year, the additional revenues were used to employ increasing numbers of workers to make the long-deferred repairs and improvements during the winter months. An example of the growing number of winter repairmen can be seen in a report by Superintendent Maus detailing the work activities on the Georgetown Division from November 1871 to March 1872:

A gang of (6) six men under Boss Mason John Brannon commenced cutting stone at Great Falls on 1st November, 1871, and worked up to Feb. 2nd 1872.

A gang of (5) men under Boss Mason John Brannon commenced repairing and rebuilding Locks 7, 10, 11, 13, 14, 15, 16, 18, 19, 20 and 21 on Jan. 8th 1872, and worked up to February 21st 1872 laying 1351 feet of new stone with cement.

A gang of (17) seventeen masons under Boss John Brannon commenced putting up Feeder Wall Feb. 20th 1872, and worked up to March 4th 1872. Length of wall 400 feet, 3 feet thick and from 9 to 15 feet high layed in cement.

A gang of (4) four man under Boss Mason John Brannon commenced repairing walls on Towpath and Berm side of Canal in Georgetown and worked from March 5, 1872 up to March 9th 1872.

A gang of (6) six men under Boss Quarryman Levi Barnes commenced to quarry stone at High Island Feb. 20, 1872, and worked up to March 4th getting out stone.

I placed a work on 1st December, 1871, (5) five Carpenters and (2) two helpers under Boss Carpenter John Collins and have accomplished the following work viz: Repaired Locks 7, 10, 11, 13, 14, 15, 18, 19, 20 & 21. Built Bridge near Lock 15 on Log wall Level, 3 stanks and one Crib' in Feeder, and laying Truck with Lumber from Quarry to high Island, taking up truck put in (2) two new flumes one at Lock 5 and one at Lock 6.

Built (2) two Bridges at the foot of Market house East and West span in Georgetown, and put up railings on Towpath side under Bridges at Market House and Aqueduct.

I placed at work on Jan. 2nd 1872 a gang of (9) nine men under Boss William Matthews, who have done the following work—Building stank at Head of Feeder, removing dressed stone to Locks, worked on Crib to Feeder, puddle culvert below Chain Bridge, repaired Wall at Jennys Mill, puddling Trunk at Thompson & Edmonston's Mill, cutting bushes on Berm Bank from Lock 5 to Lock 8, removed mud & stone from Lock 5 to stop Lock, making stank and pumping out Lock 6, worked on Feeder and cleaning out Bottom of Canal in Georgetown Level.

I placed at work on Jan. 2nd 1872, a gang of (8) eight men under Boss John C. Myers, who have done the following work viz: Tearing down Lock 15, attending Masons at Locks 7, 10, 11, 13, 14, 15. Tearing down Lock 14, removing mud and stone from

that spent. In January 1872 the net profit was \$476.32 and in September 1875 the profit was \$558.45. Apparently, the carpenters and others who worked in the company shops along the line rented their own quarters except when they were on special assignments at various points along the line. On those occasions, they boarded on the company house-boats or in lock houses or other company structures and paid 50 cents per say for room and board. *Monthly Statements of Receipts and Expenditures for Boarding Employees on the Canal Line, 1872–1877*, C & O Co.

⁷⁶ *Proceedings of the President and Board of Directors*, L, 411.

⁷⁷ *Ibid.*, L, 435–436.

Lock 8 to Lock 15. Worked at Feeder from Feb. 20th up to March 4th. Also removed mud & stone out of Bottom of Canal on Georgetown Level.

I placed at work on Jan. 2nd 1872, a gang of (9) nine men who have accomplished the following work—Tearing down and attending Masons at Lock 15, 16, 18, 19, 20 & 21. Cut the Bushes on Berm Bank of Canal at Lock 20. Cutting to Lock 20, removed mud and stone from out of Bottom of Canal at Lock 20 to Lock 23. Worked on Feeder from Feb. 20th to March 4th, removed mud and stone out of Bottom of Canal on Georgetown Level. This gang under Boss I. G. Fields.

I placed at work on Feb. 13th 1872, under Bosses Cammack, Kendle & Connell (104) one hundred & four men who were wheeling stone, wheeling sand, carrying cement, mixing cement and cleaning out the Bottom of [the] Canal, removing mud and stone out of Georgetown Level. Working off and on to March 11, 1872.

We have on hand (6) six new lock gates and 3 old ones that have been repaired which I consider almost as good as new. There has been more work accomplished on this Division this past winter, than has been done any season for the past ten (10) years; the Division is in a great deal better condition now than it has ever been for that space of time.⁷⁸

In June 1872 Arthur Pue Gorman, who had served both as a member of the canal board and the House of Delegates since 1869, was elected as president of the canal company. Almost immediately Gorman moved the canal office from Frederick to Annapolis. However, there was no reorganization of the canal management or significant turnover of personnel until the latter end of his ten-year presidency.⁷⁹ One of the earliest surveying registers of canal employees that list the positions, number of workers, and salaries by division from Georgetown to Cumberland is that for March 1873. The register is as follows:

GEORGETOWN DIVISION		
Superintendent	I. R. Maus	\$83.33 per month
Collector	W. W. Blunt	125.00 per month
Assistant Clerk	C. Stewart	75.00 per month
Inspector	Hughes	75.00 per month
Harbor Master	James S. Kemp	75.00 per month
Lock-keepers (18)		
Boss Carpenter		70.00 per month
Carpenter (5 men)		2.50–3.00 per day
Boss Mason		5.00 per day
Masons (3 men)		2.50–4.00 per day
Blacksmith		60 per month
Helper		1.50 per day
Boss of Laborers		47.50 per month

⁷⁸ *Ibid*, L, 561–564.

⁷⁹ *Frederick Examiner*, June 5, 1872, and *Proceedings of the President and Board of Directors*, M, 32, 34, 113, 171, 223, 265, N, 1, 49, 87, 108, 192.

Laborers (14 men)		1.50 per day
Cook		20.00 per month
Boss of Laborers (2 men)		47.50 per month
Assistant		1.58 1/3 per day
Laborers (24 men)		1.50 per day
Level Walker		46.50 per month
Cook		20.00 per month
MONOCACY DIVISION		
Superintendent	D. T. Lakin	\$83.33 per month
Collector	George T. Pope	75.00 per month
Assistant Clerk	Joseph Holland	60.00 per month
Lock-keepers (12)		
Boss Carpenter		2.50 per day
Carpenters (3 men)		2.25 per day
Boss Mason		4.00 per day
Masons (5 men)		1.50–4.00 per day
Blacksmith		2.25 per day
Boss of Laborers		47.50 per month
Laborers (11 men)		1.50 per day
Cooks (2 women)		20.00 per month
Assistant cook		1.50 per day
Boss of Laborers		47.50 per month
Laborers (19 men)		1.50 per day
Cook		20.00 per month
Boss of Laborers		47.50 per month
Laborers (24 men)		1.50 per day
Cook		20.00 per month
ANTIETAM DIVISION		
Superintendent	John Shay	\$83.33 per month
Lock-keepers (6)		
Carpenters (2 men)		2.25 & 2.50 per day
Blacksmiths (2 men)		2.25 per day

Boss		45.00 per month
Level Walker		1.50 per day
Laborers (9 men)		1.40 per day
Cook		20.00 per month
Boss		45.00 per month
Level Walker		1.50 per day
Laborers (5 men)		1.50 per day
Cook		20.00 per month
Boss		45.00 per month
Level Walker		1.50 per day
Laborers (7 men)		1.50 per day
Cook		20.00 per month
Mason		3.50 per day
HANCOCK DIVISION		
Superintendent	Denton Jacques	\$83.33 per month
Collector	H. Blackman	35.00 per month
Collector	J. V. L. Ensminger	35.00 per month
Lock-keepers (11)		
Carpenters (4 men)		2.00–2.50 per day
Blacksmith		2.00 per day
Masons (3 men)		3.00–3.50 per day
Stone Cutter		3.50 per day
Tender		1.50 per day
Boss		45.00 per month
Laborers (32 men)		1.50 per day
Cook		18.00 per month
Boss		45.00 per month
Laborers (11 men)		.96–1.50 per day
Cook		18.00 per month
Boss		45.00 per month
Laborers (10 men)		1.50 per day
Cook		18.00 per month

Boy		16.00 per month
Boss		45.00 per month
Laborers (9 men)		1.50 per day
Cook		18.00 per month
Horse Hire (26 mules & drivers)		189.25 per month
CUMBERLAND DIVISION		
Superintendent	Edward Mulvaney	\$83.33 per month
Collector	William Weber	125.00 per month
Assistant Collector	John M. Resley	100.00 per month
Inspector	C. V. Hammond	75.00 per month
Assistant Inspector	Phoebe A. Neil	16.67 per month
Lock-keepers (20)		
Boss Carpenter		75.00 per month
Carpenters (5 men)		2.25–2.35 per day
Boss		45.00 per month
Laborers (10 men)		1.50 per day
Cook		18.00 per month
Boss		45.00 per month
Laborers (6 men)		1.50 per day
Boss		45.00 per month
Laborers (8 men)		1.50 per day
Cook		18.00 per month ⁸⁰

As the canal company had been operating with a five-division alignment since 1870, a group of 29 citizens addressed a memorial to the Gorman board in May 1873 requesting the reestablishment of the Williamsport Division as the sixth superintendency. The memorial contained seven reasons for such an action:

- (1) Most previous boards maintained the division
- (2) Williamsport was centrally located on the canal line
- (3) Williamsport was an historic canal-centered town
- (4) Williamsport had fostered the canal in its early years and had extended credit to the company during the financially-troubled years.
- (5) The coming connection of the Western Maryland Railroad with Williamsport would increase the commercial prospects of the town
- (6) The great lengths of the present divisions

⁸⁰ Payrolls, March 1873–July 1874, C & O Co.

- (7) The danger of the slackwaters behind Dams Nos. 4 and 5 required closer attention.

In conclusion, the memorial mentioned the increasingly important political considerations underlying the request:

But, we respectfully submit, there are other reasons deemed equally as important by the entire party to which, we, in common with the entire management of the Canal belong. So long as the President and Directors of the Company are appointed solely from the dominant political party in the State, so long will that party be held politically responsible for its management. The President and Directors being appointed with equal reference to their political affiliations and their known competency and integrity, the masses of the party naturally expect the principle to be carried out with regard to the patronage and subordinate places. And we beg to remind your honorable Board, in no spirit of captious fault-finding that the failure to fully recognize this principle has placed the supremacy of our party in this county [Washington] in jeopardy, and threatens us now with impending defeat. Recognizing the importance, at this time, of this view of the matter, and to evince our unity and harmony in the accomplishment of what we believe to be off essential importance to the good management of the Canal and the success of our political party, we have laid all individual preferences aside and agreed to recommend Jonathan Spillman for the position of Superintendent, believing that he is in every way competent, and that he will give unbounded satisfaction to the Company and the people of Williamsport.

The memorial was referred to a special committee which recommended that the management of the canal did not require a new Williamsport Division; thus, the proposal was rejected at that time.⁸¹

During the years 1875 and 1876 disputes arose over the wages paid by the company to the repair crews, and further conflicts developed over how much should be deducted from the worker's pay to cover the cost of room and board. In 1875 thirteen crew bosses sent a petition to the directors asking for a pay increase. The petition is interesting in that it describes some of the conditions under which the repairs crews operated:

Our pay remains the same that it was when the present system for managing the Canal was inaugurated and when we take into consideration the increase of labor and responsibility consequent upon the increased trade upon the Canal we feel confident you cannot fail to see the justice of our prayer. We would further set forth that we receive one third less pay than others occupying similar positions under other corporations or public works. In consequence of the regulations established we are prohibited from engaging in any other business; we are therefore dependent upon this above for the support of our families, and when you take into consideration the increase in cost of living compared with the past you will discover that we are rendering service for less pay than formerly. This too when some of us flatter ourselves that by a constant and undivided attention to our duty we have contributed much to the present financial prosperity of this great work. We would further submit that we are in the discharge of our duty constantly exposed to contagious and malarial diseases entailing upon us great physical suffering as well as pecuniary loss. In conclusion permit us to say that we are all deeply impressed with the

⁸¹ Memorial, variously signed, to President and Directors of the Chesapeake & Ohio Canal Company, May 31, 1873, Ltrs. Recd., C & O Co.

great responsibility of our position and feel a deep interest in this great work under your charge and knowing you to be gentlemen of enlarged and liberal views, we ask nothing but justice and right at your hands.⁸²

In May 1876 trouble erupted near Sharpsburg when Superintendent Samuel Mc Graw of the Antietam Division ordered his men to repair a breach in the canal. Those workers with carts refused to go to the site of the break until they were assured of receiving \$3.50 per day. The common laborers joined in the short-lived sit-down strike until McGraw agreed to pay them \$1.50 plus room and board per day. Similar wage increases soon spread throughout the entire length of the canal.⁸³

The question of what amount should be deducted from the wages of canal employees for room and board also arose in May 1876. Up to this time the company had deducted 50 cents per day from the pay of workers to pay for the cost of food and housing in "house-boats," lock-houses, or company-owned structures along the line. Such arrangements were not provided for the carpenters and blacksmiths who worked in the company shops at such locations as Lock No. 5, Great Falls, Edwards ferry, Sandy Hook, Williamsport and Cumberland. These men had to provide for their own room and board (which averaged 75 cents a day) with the exception of those periods when they were assigned to projects along the canal. The problem was complicated by the fact that the company deducted 50 cents a day from the workers' wages even though at times the company was forced to board its hands in private homes at 75 cents per day. Thus there was considerable dissatisfaction by both canal officials and employees with the company's system of providing for room and board. Before the problem could be resolved, however, the declining fortunes of the canal would eliminate the need for discussions about the adoption of a more equitable system of providing for the men.⁸⁴

In November 1877 the most disastrous flood in the history of the canal up to that time struck the canal, reaching levels from two to six feet higher than the worst previous flood in 1852. On December 1 all the company employees, including the collectors and lock tenders, who were not engaged on the repairs were relieved from duty so that expenditures were restricted to the actual cost of repairs and office expenses. The line of the canal was also reduced to three divisions as follows:

- 1st Division—Eastern terminus to and including Dam No. 2—John T. Fletchall, Superintendent; Isaac Maus, assistant superintendent
- 2nd Division—Dam No. 2 to upper end of slackwater at Dam No. 4—J. J. Moore, Superintendent; Samuel Mc Graw, assistant superintendent
- 3rd Division—Head of Dam No. 4 slackwater to western terminus—L. G. Stanhope, Superintendent.⁸⁵

⁸² Memorial, variously signed, to Board of Directors of Chesapeake & Ohio Canal Company, 1875, Ltrs. Recd., C & O Co. Apparently, the board paid little attention to the petition.

⁸³ Mc Graw to Gorman, May 17, 1876, Ltrs. Recd., C & O Co. Up to this time, the laborers had received \$1.50 per day out of which 50 cents was deducted for room and board.

⁸⁴ Fletchall to Gorman, May 27, 1876, Ltrs. Recd., C & O Co.

⁸⁵ *Fifteenth Annual Report* (1878), C & O Co., 9–10. Paymaster Stephen Gambrill was placed in charge of the repairs on the Georgetown Level; Fletchall was given immediate supervision over the repairs from Lock No. 5 to Dam No. 2; Moore was instructed to employ 200 laborers and as many horses and carts as he could at Dams No. 3 and 4; Stanhope was ordered to rebuild Dam No. 4 and hire 60 men to repair Dams No. 5 and 6; and Cumberland collector A. Willison was authorized to employ 100 men to repair the canal from Dam No. 6 to Cumberland. Gorman to Board of Directors, December 12, 1877, Ltrs. Recd., C & O Co.

After the canal was restored to navigation in the spring of 1878, the old seven-division management system was reestablished. The positions, number of employees, and salaries that were adopted at this time were as follows:

"The salaries of officers and pay of employees are: President, \$2,500; Treasurer, \$2,000; Engineer, \$2,400; Paymaster, \$1,500; Collector at Cumberland, \$1,500; Collector at Georgetown, \$1,500; Collectors at Williamsport and Hancock, each \$25 per month; assistant clerk to Treasurer, \$1,200; Inspector of cargoes at Georgetown, \$900; Directors, while in season, \$4 per day; seven division Superintendents, each \$1,000 per annum; 17 bosses, each \$45 per month; average of 20 laborers to each division at \$1 per day and board; 15 smiths, \$2.25 per day; about 3 carpenters to each division at from \$4 to \$2.25 per day; lock-keepers, \$60 per month for double and \$40 for single locks.⁸⁶

During the late 1870s the Gorman board sought for ways to reduce its operating expenses by introducing various improvements. One improvement, completed and in operation by October 1879 was the installation of a telephone line along the waterway built by company hands under the supervision by Telephone Engineer J. Frank Morrison at a cost of nearly \$15,000. There were 43 stations so located as to be within easy reach of any point on the canal. The telephone system, which was the longest single circuit then in existence, enabled the canal company to reduce operating costs by providing fast communication of information relative to breaches and canal traffic problems. Such information had been carried formerly on foot or by horseback or mail.⁸⁷

In his annual report to the stockholders in June 1880 President Gorman announced that the telephone system had proven successful in facilitating canal repairs and enabling the company to concentrate its regular work at several locations along the waterway. Such developments had reduced the cost of labor and lessened the need for seven division superintendents. Accordingly, the number of divisions had been reduced to two:

- 1st Division—Eastern terminus to Lock No. 39—J. J. Moore, superintendent
- 2nd Division—Lock No. 39 to Western terminus—Lewis G. Stanhope, superintendent

It was calculated that this reorganization would save the company some \$12,000 annually in overhead expenses.⁸⁸

By 1880 Gorman had used his position as canal president to secure his hold of the Democratic Party in Maryland and win election to the United States Senate. Some critics, such as ex-canal president Alfred Spates, accused Gorman of relegating the real needs of the canal to a level of concern secondary to his effort of employing his position—one of great political influence in Western Maryland and hence Annapolis—as a vehicle to achieve his personal political ambitions. Such charges were summarized in an article in the Cumberland *Civilian* on March 3, 1878:

⁸⁶ Frederick *Citizen*, 1878, in Alfred Spates Papers, University of Virginia Library, Charlottesville. The precise date of the article, which had been clipped from the newspaper, could not be determined.

⁸⁷ *Proceedings of the President and Board of Directors*, N, 92–97, and *In the Circuit Court of the United States for District of Maryland: In Equity Daniel K. Stewart vs. Chesapeake & Ohio Canal Company and others* (Baltimore, [1878]), 106, 328–329, 333–334. Two descriptions of the telephone system may be seen in Appendices C and D.

⁸⁸ *Fifty-Second Annual Report* (1880), C & O Co., 11.

These charges allege that under the present management the canal has been for several years past in bad condition; that previous to 1872 boats carried from 130 to 135 tons of coal, and now carry no more than 110 to 120. That the prism has filled up as to make it almost impossible for boars to pass in many places; three guagers are employed to do the work of one; two men are employed as collectors at Cumberland at an expense of \$2,700, while one of them offers to do all the work for \$1,500; that an officer of the company here employed a large number of men solely to make use of them for political purposes in the Democratic primaries, so as to defeat certain men who were objectionable to the President of the company, and that for their political services they were paid by the canal company; that officers of the company bought votes, and thus aided in defeating the Democratic candidate; that certain officials were appointed solely in consideration of their promise to render certain services at Annapolis at the bid of the President and Directors of the canal company; that a contingent of \$6,000 in the hands of these officials was expended in such a way as to demand investigation; that some of the officials of the canal company are receiving pay for two offices; and that Directors who are forbidden by the charter to receive more than the amount of their expenses are getting salaries, and that the pay of others has been doubled; that expensive excursions are of frequent occurrence, on which occasions an elegant boat with costly appointments is used, and unnecessary expenses incurred. . . .⁸⁹

Gorman replied to the charges by denying the specific allegations of wrongdoing while at the same time admitting that political considerations had been involved in filling canal jobs. In commenting on the Gorman years as president of the canal company, his biographer, John R. Lambert, commented:

The canal reflected the political complexion of the state. Maryland was the largest stockholder and as such chose its governing officials. The board of public works was composed of the governor, the comptroller, and the treasurer, all of whom had strong party affiliations that dictated their choice of the president and directors of the canal. In the same way, the lesser appointments in the company's service were also made, for the most part, from members of the dominant party. It [the system] had always existed.

According to Gorman, the system was justified because:

In the ranks of either of the political parties, which divide the intelligence of the country not less than its votes, it is always easy to find honest and capable men who are fitted, intellectually and morally, for the most important trusts, and have no great unwillingness to accept them.⁹⁰

In August 1882 Gorman retired as president of the canal company to devote full time to his political career. A secondary reason for his departure was the decline in the fortunes of the canal as a result of trade stagnation, financial depression, stiff competition, and physical deterioration. Following the reign of Gorman, there was a succession of short administrations by political appointees, all of whom owed their positions to him. The administrations were as follows: Lewis C.

⁸⁹ Cumberland *Civilian*, March 3, 1878, in Spates Papers.

⁹⁰ Quoted in John R. Lambert, *Arthur Pue Gorman* (Baton Rouge, 1953), 71–72.

Smith, (August 1882); L. Victor Baughman (December 1884); and Stephen Gambrill (January 1888).⁹¹

To resolve the financial dilemma as well as it was able, the canal company resorted to several devices. First, it cut the ordinary expenses of operation whenever and wherever possible. Second, the board applied its economy measures to the work of maintenance and improvement by authorizing only the most essential repairs to the waterway and suspending work on the comprehensive program of improvements laid down by the Gorman administration in the mid-1880s.

During a miner's strike in the spring of 1882 trade on the canal was virtually suspended. The board reduced the pay of the lock tenders from \$40 to \$20 per month and that of the bosses and horsemen from \$45 and \$25 to \$25 and \$15 per month, respectively. The salaries were not restored to the pre-strike levels until May 1883.⁹²

Further steps were taken to reduce operating expenses during the winter of 1883–84. Effective January 1, the pay of the lock tenders was reduced by 50 percent. Moreover, 65 employees on the 1st Division and 40 on the 2nd Division were laid off. Many of the men were rehired in the early spring to help get the canal ready for the new boating season.⁹³

Still unable to meet its expenses, the board on April 24, 1884, ordered a 50 percent reduction in the number of its laborers. Accordingly, the following cuts were made:

DIVISION NO. 1			
J. Shipley	Boss Carpenter	From Self & 3 men	to Self & 1 man
M. Lynch	Boss Carpenter	From Self & 2 men	to Self & 1 man
J. P. Biser	Boss Carpenter	From Self & 7 men	to Self & 3 man
G. G. Latchford	Boss	From Self & 14 men	to Self & 4 men
Connell	Boss	From Self & 15 men	to Self & 6 men
Scraggs	Boss	From Self & 20 men	to Self & 10 men
Riley	Boss	From Self & 17 men	to Self & 10 men
Elgin	Boss	From Self & 13 men	to Self & 6 men
Boteter	Boss	From Self & 15 men	to Self & 6 men
Allen	Boss	From Self & 18 men	to Self & 10 men
Drenner	Boss	From Self & 15 men	to Self & 6 men
Marrow	Boss	From Self & 12 men	to Self & 6 men
		From 12 Bosses & 141 men	to 12 Bosses & 69 men
DIVISION NO. 2			
S. D. Young	Boss Carpenter	From Self & 5 men	to Self & 1 man
J. W. Burgess	Boss Carpenter	From Self & 3 men	to -----
S. Troup	Boss Carpenter	From Self & 3 man	to Self & 1 man
Kelly	Boss	From Self & 12 men	to Self & 4 men
Sprigg	Boss	From Self & 12 men	to Self & 4 men
Hittenhouser	Boss	From Self & 7 men	to Self & 4 men
Masters	Boss	From Self & 8 men	to Self & 4 men
S. Sterling	Boss	-----	-----
J. F. Sterling	Boss	From Self & 14 men	to Self & 6 men

⁹¹ Sanderlin, *Great National Project*, 247–248, and *Proceedings of the President and Board of Directors*, N, 197–198, 298–299, 301, 323–324, 350, 370.

⁹² *Proceedings of the President and Board of Directors*, N, 189–190, 214.

⁹³ *Ibid*, N, 246, and *Fifty-Sixth Annual Report* (1884), C & O Co., 17.

Hughes	Boss	From Self & 9 men	to Self & 6 men
Burgan	Boss	From Self & 16 men	to Self & 8 men
		From 10 Bosses & 89 men	to 9 Bosses & 38 men

In addition, one gang of hands at the Basin Wharf in Cumberland was to be dismissed to provide a savings of 25 percent in its operating costs.⁹⁴

Faced with increasing debts and a continuing decline in trade revenues, the board in June 1884 ordered 20 to 25 percent cuts in pay and personnel. The following reductions were made:

DIVISION NO. 1			
J. J. Moore	Superintendent	From \$125	to \$100 per month
J. Isaccs	Assist. Superintendent	From \$100	to \$80 per month
William Snowden	Collector	From \$125	to \$100 per month
W. Jarboe	Clerk	From \$100	to \$75 per month
36 Lock-keepers		From \$40	to \$30 per month
4 Lock-keepers		From \$45	to \$35 per month
1 Lock-keeper		From \$50	to \$40 per month
1 Lock-keeper		From \$65	to \$55 per month
Richard Clark	Helper at Outlet	From \$30 per month	to dismissal
James Vaughan	Mason	From \$1.75 per day	to dismissal
E. Elias	Assist. Carpenter	From \$1.75 per day	to dismissal
D. Reed	Assist. Carpenter	From \$1.75 per day	to dismissal
William Danner	Assist. Carpenter	From \$1.75 per day	to dismissal
Joseph Elgin	Assist. Carpenter	From \$1.75 per day	to dismissal
G. G. Latchford	Boss of Dredge	From \$70	to \$35 per month
A. W. Latchford	Engineer & Watchman	From \$2	to \$1 per day
Average Monthly Force (12 men)		From \$1.10 per day	to dismissal
W. H. Riley	Boss	From \$55 per month	to dismissal
Average Monthly Force (10 men)		From \$1.10 per day	to dismissal
Cannell	Boss	From 8 men to 4 men at \$1.10 per day	
C. F. Elgin	Boss	From 10 men to 4 men at \$1.10 per day	
Scaggs	Boss	From 12 men to 4 men at \$1.10 per day	
R. H. Botter	Boss	From 6 men to 4 men at \$1.10 per day	
William Allen	Boss	From 12 men to 4 men at \$1.10 per day	
Silas Duncan	Boss	From 8 men to 4 men at \$1.10 per day	
James Marrow	Boss	From 7 men to 4 men at \$1.10 per day	
DIVISION MO. 2			
Lewis G. Stanhope	Superintendent	From \$125	to \$100 per month
A. Willison	Collector	From \$150	to \$125 per month
John Edwards	Assist. Collector	From \$100	to \$75 per month
J. Ranahan	Guager	From \$50	to \$30 per month
E. J. Neill	Inspector	From \$40	to \$30 per month
J. Spielman	Collector	From \$50	to \$40 per month

⁹⁴ *Proceedings of the President and Board of Directors*, N, 257–258, and *Fifty-Sixth Annual Report* (1884), 19–20.

28 Lock-keepers		From \$40	to \$30 per month
4 Lock-keepers		From \$65	to \$55 per month
2 Lock-keepers		From \$50	to \$40 per month
H. Tedrick	Packet	From \$50	to \$35 per month
Carpenter		From \$1.75 per day	to dismissal
Blacksmith		From \$1.75 per day	to dismissal ⁹⁵

Additional drastic cuts were made in the staff of the central office at Annapolis in July. The offices of general superintendent, assistant superintendent and engineer were abolished, and President Smith assumed the duties of general superintendent. The number of employees at Annapolis was reduced to five—president, treasurer, accountant, clerk, messenger—and their salaries were reduced by 20 percent.⁹⁶

At the annual meeting of the stockholders in June 1885 L. Victor Baughman, who had been elected as president of the canal company in the previous December, announced that the reduction of salaries and wages, the discharge of unnecessary employees, and the consolidation of offices had resulted in a savings of \$26,473.57 in operating expenditures. However, the company was still unable to meet its monthly payroll and had fallen behind several months in its payments to the workers. Most of the company laborers were continuing to perform their jobs despite the backlog in wages, although some workers in Washington County had left their places of employment. Henceforth the two superintendents, J. P. Biser and Edward Mulvaney, would make monthly trips over their divisions and submit written reports to the president concerning the work that needed to be done.⁹⁷

Owing to the limited means of the company, Superintendents Biser and Mulvaney were ordered to dispense with the services of the entire canal labor force in January and February 1886. Only those employees who were needed to police company property were to stay on the payroll and then at reduced salaries.⁹⁸

AMOUNTS DUE TO UNPAID LABORERS AND OTHER PERSONS 1883–1889	
1883	\$ 2,088.54
1884	\$ 2,803.94
1885	\$ 174.46
1886	\$ 589.45
1887	\$ 4,686.48
1888	\$21,609.98
1889	\$26,554.06
	\$58,509.91*

* Amount unpaid as of Nov. 1, 1889, Register of amounts Due Labor, 1883–1889, C & O Co.

⁹⁵ *Proceedings of the President and Board of Directors*, N, 267–268.

⁹⁶ *Ibid*, N, 274. In addition, the position of assistant collector at Georgetown was abolished, and all of the carpenters on Division No. 1 were consolidated under the supervision of J. J. Biser.

⁹⁷ *Fifty-Seventh Annual Report* (1885), C & O Co., 6–7, 9. See the following page for a list of the “Amounts Due to Unpaid Laborers and Other Persons, 1883–1889.”

⁹⁸ *Fifty-Eighth Annual Report* (1886), C & O Co., 11–12.

President Baughman reported to the stockholders at their annual meeting in January 1887 on the results of the cost-saving policies of his administration and the prospects of the company for the coming year. Among his comments were the following statements:

It will be observed that in the first year of our management a saving of over thirty thousand dollars on the running expenses of the canal was effected over the expenditures of the year 1884. A still further reduction of nearly twenty-three thousand dollars was effected this year over the year 1885, thus making the reduction for 1886 nearly fifty-three thousand dollars less than it cost to run the canal in 1884....We feel assured by an enforced system of economy we will be able to make still further reductions during the year 1887.

The present administration does not propose to take advantage of honest labor by employing men in various positions when there is no prospect of obtaining the means by which they are to be remunerated.

We have endeavored to carry out the pledges made to the people of Maryland when we assumed charge of the affairs of this Company two years ago, at which time we gave our assurance that a strict business management would be inaugurated, and that under no circumstances should this great work be prostrated for political purposes.⁹⁹

An article appeared in the *Baltimore Sun* on August 20, 1887, describing in considerable detail the company provisions for room and board for its workers. In light of the desperate financial condition of the company and its numerous cost-cutting policies relative to labor, the article appears to be self-serving. Nevertheless, it is the most exhaustive treatment of the living and working conditions of the canal maintenance crews that is available:

The number of employees of the Canal Company is about 275, of whom 125 are laborers who live in houses on land or in boats owned by the company, their quarters are fitted up with berths, wash stands, dining tables and other conveniences, and are noted for cleanliness. The laborers are paid \$1.10 per day and are charged forty cents daily for board. Good cooks prepare and serve the food, which consists of beef, pork, bacon, vegetables, butter, bread, coffee and sugar. Each berth has a comfortable mattress and clean sheets and plenty of blankets. It was a wise act on the part of President Baughman to provide the men with good food and quarters, as they are in better condition physically than formerly, and, being satisfied, work harder. The cooks, of whom there are about twenty, are the only women in the laborers' houses. They have separate apartments, and manage to preside over their stoves and tables in a manner that commands respect. The men eat breakfast between six and seven o'clock, go to work at seven, take an hour for dinner at mid-day, and quit work at six o'clock. Then they wash, and spend the evening smoking, singing, telling jokes, and having a good time generally. The company's boats are towed to any point where work is required....

Carpenters, bosses and miscellaneous workmen make up the remainder of the list of employees.¹⁰⁰

In his last annual report to the stockholders in January 1888 just before Stephen Gambrill, the son-in-law of Senator Gorman, was elected to replace him, President Baughman recited the accomplishments of his three year administration. Although somewhat exaggerated, the report indi-

⁹⁹ *Fifty-Ninth Annual Report* (1887), C & O Co., 11–12.

¹⁰⁰ *Baltimore Sun*, August 20, 1887, in Spates Papers.

cates his concern for the achievement of the most efficient management system possible for the canal in light of the deteriorating company finances:

Impressed with the belief that the proper administration of its affairs demanded a total divorce of its management from all political entanglements, we distinctly asserted in our letter of acceptance three years ago that the canal should, during our term, be conducted solely on business principles.

With that end in view, useless offices were abolished, the number of employees decreased, expenses were curtailed, a close personal supervision was given to every branch and department, and no effort was left unused to secure an increase of tonnage and to stimulate the development of trade. As a consequence there is not today, and there has not been during our term, a single supernumerary or extra hand in the service of the company; there has not been, and there is not now, a single instance where a saving could have been effected in any way consistent with maintaining the efficiency of the works that have been overlooked, and every available ton of freight which the capacity of the boats was equal to was secured for transportation. Politics and political matters were kept studiously out of the business and the management of the canal, and we can say, without the fear of a successful denial from any source whatsoever, that the canal has not in any shape or form been used in the interest of or against any political party during our incumbency of the office of president.¹⁰¹

¹⁰¹ *Sixtieth Annual Report* (1888), C & O Co. 5–6.

IX.: MANAGEMENT OF CANAL MAINTENANCE ACTIVITIES DURING THE RECEIVERSHIP PERIOD: 1889–1924

Following the titanic flood of 1889, the canal company admitted that it was unable to raise funds to repair its works and that it was bankrupt. As the majority owner of both the 1878 and 1844 bonds, the Baltimore & Ohio Railroad held preferred mortgages on the physical property and the revenues of the canal. On December 31, 1889, it petitioned the Circuit Court of Washington County for the appointment of receivers under the mortgage of 1844. On March 3, 1890, receivers were appointed to restore and operate the canal.¹⁰²

The receivers soon took steps to restore the navigation of the canal. H. C. Winship, a long-time employee of the canal company, was hired as general manager, while H. D. Whitcomb, a former general engineer for the Chesapeake & Ohio Railroad Company and one of the commissioners for the construction of the levees on the Mississippi River, was employed as chief engineer. By the spring of 1891 some 1,000 laborers were involved in the repairs.¹⁰³

At the same time the receivers commenced a review of the overall maintenance and operating needs of the waterway. The assessment led to the preparation of a list of the estimated number and types of positions required to manage the canal:

1	General Superintendent and Manager	\$3,000
1	Assistant Superintendent, 1 st Division	1,200
1	Assistant Superintendent, 2 nd Division	1,200
1	Collector at Cumberland	1,000
1	Clerk at Cumberland	600
2	Boss Carpenters (@ \$60 per month)	1,440
1	Assistant Carpenter (@ \$35 per month)	420
40	Laborers (250 days @ \$1.10 per day)	11,000
3	Boss Carpenters (10 months @ \$60 per month)	1,800
7	Assistant Carpenters (10 months @ \$39 per month)	2,730
10	Section Bosses (10 months @ \$60 per month)	6,000
10	Section Bosses (2 months @ \$15 per month)	300
80	Laborers (250 days @ \$1.10 per day)	22,000
11	Level Walkers (300 days @ \$1.10 per day)	3,630
15	Horses Owned by Bosses & Others (@ \$15 per month)	2,700
1	Collector at Hancock (@ \$30 per month)	360
1	Collector at Williamsport (@ \$40 per month)	480
59	Lock-Keepers (10 months @ \$20 per month)	11,800
6	Lock-Keepers, Outlets and Bridges (10 months @ \$30 per month)	1,800
2	Lock-Keepers, Waybills & Feeders (10 months @ \$40 per month)	800
1	Lock-Keeper, Feeder (10 months @ \$25 per month)	250
3	Lock-Keepers and Inspectors (10 months @ \$35 per month)	1,050
1	Collector at Georgetown	1,200
1	Clerk at Georgetown	720
1	General Bookkeeper and Cashier at Company Office	1,500
		\$78,980

¹⁰² Sanderlin, *Great National Project*, 263–266.

¹⁰³ Petition of Trustees, April 25, 1891, Receivership Papers, Washington County Courthouse, Hagerstown, Maryland

In addition, a list of other estimated maintenance and operating costs was compiled as follows:

Cumberland Wharf	\$5,000.00
Trimming Cargoes	2,606.50
Operating Territory within District of Columbia including Georgetown Incline	5,000.00
Material for Repairs (gates, houses, flumes, wasteways, trunk bridges, scows, boats, wheelbarrows, shovels, picks, iron)	14,020.00
	¹⁰⁴ \$28,626.50

It is not known how closely this estimate was followed in subsequent years as the receivers established a management system for the maintenance and operation of the canal. The payrolls for this period, which are listed as existing in the Chesapeake & Ohio Canal records at the National Archives, have been lost. As a result, there is no accurate method of determining the composition of the employees on the line. However, a cursory examination of the annual expenditures by the trustees during the receivership period indicates a close correlation between those figures and the listed cost estimates in 1890.¹⁰⁵

Because of the unavailability of payroll lists and detailed annual reports for the period little is known about the men who managed the canal during the receivership. The only individual for whom there is some information is George L. Nicholson, who served as general manager and superintendent of the waterway from the early 1890s until 1938 when the canal was sold to the federal government.¹⁰⁶ Another man long associated with the canal during this period was Samuel Sidney Connell, who served as section boss from Lock No. 22 to Brunswick from the early 1900s to 1924.¹⁰⁷

¹⁰⁴ "Estimated Cost of Operating Canal," filed June 9, 1890, Receivership Papers.

¹⁰⁵ Reports of Trustees, 1891–1924, Receivership Papers.

¹⁰⁶ Sanderlin, *Great National Project*, 186–187.

¹⁰⁷ Jane Chinn Sween, "A History of Dawsonville and Seneca, Montgomery County, Maryland" (Mss. Maryland Historical Society, 1967), 69. Connell lived in a company house beside the Seneca basin during his tenure from the early 1900s to 1933. The structure was torn down after his death in the latter year.

X. RESUMPTION OF REGULAR MAINTENANCE ACTIVITIES PERFORMED BY CANAL COMPANY CREWS

A review of the canal company records indicates that virtually throughout the operating history of the canal regular maintenance activities were performed by work crews headed by bosses who were generally under the immediate supervision of the division superintendents. During the winter months from mid-December to mid-March the canal was usually closed to navigation. It was during this period that the crews removed siltation deposits and other obstructions from the canal trunk, made major repairs to the masonry locks, aqueducts and culverts, and restored the towpath to grade. Repairs or improvements were made to the lockhouses and the company shops and offices along the waterway. The wooden gates and the wicket rods in the locks and the waste weirs were replaced by new ones built in the company carpenter shops at various points along the canal. Such items as the woodwork in the composite locks also were overhauled during the winter. The winter months were also the time when long-range improvements, such as the lengthening of some of the locks in the 1870s and 1880s, were accomplished. Sometimes when a break occurred at an aqueduct or a culvert during the navigation season, a temporary wooden trunk would be thrown over the "trouble-spot" until more extensive repairs could be made in the winter.

During the boating season which usually lasted from mid-March to mid-December, the company crews were kept busy with a variety of duties. Some of their more frequent activities included clearing deposits and debris from the culvert barrels, strengthening the towpath and berm embankment protection walls, and making minor repairs as needed on the canal structures. Aside from these duties, the crews were kept busy repairing breaches in the canal banks, replacing lock gates that had been damaged by boats, and raising sunken hulls. The crews also performed the necessary restoration work to the canal after the frequent spring and fall freshets which struck the Potomac Valley. When major floods occurred additional hands were often recruited in the towns and villages along the canal to supplement the regular work crews. One of the most frequent problems to face the canal company during the summer months was that of an inadequate supply of water. As this situation was generally caused by the low level of the Potomac and leaks in the dams, the crews often spent much time tightening the structures in an effort to raise the level of the pool of water backed up behind them.

APPENDIX A

PROPERTY ON AND ABOUT THE HOUSEBOAT ON THE 2ND DIVISION, AUGUST 1870

An inventory of property belonging to the Chesapeake & Ohio Canal Company on and about the house boat on the 2nd division J. Y. Fletchall Superintendent [August 1, 1870].

J. Y. Fletchall Superintendent [August 1, 1870] ¹	17 saucers & 13 cups for Table
2 wheel barrows old sag ½ worn	1 pepper box, 2 oil cans
6 wheelbarrows very good (new)	21 plates, 2 white dishes 1 Brown dish
2 wheelbarrows for stone new & good	1 stew pan, 2 Molasses mugs
3 crow Bars	1 Pitcher, 3 tin pans
4 picks	1 Kitchen Lamp, 1 Tea Pot, 1 Sifter
6 shovels old ¾ worn	1 Coffee mill, 1 Wash bowl
1 cart & gear	1 Jug, 4 Buckets (wood), 3 tin cups
1 tool box in good order	1 office Stove half worn, 2 chairs
1 feed box in good order	2 Benches for table, 1 long table & one small table for office
1 small house for provisions	1 Stove in Scow & pipe 2/3rds worn
1 stable for horse in very bad order	1 Block & fall in good order
1 scow in good order	1 Tow line new—some old rope of little use
The House Boat in fair condition—a few repairs needed	4 spalding hammers—! Grind Stone ½ worn
13 mattresses more than half worn out	2 Sledges, 1 shovel
13 sheets half worn	3 Wash basins, 2 stools
13 Bolsters half worn	6 Table spoons & 6 Tea spoons
13 pr Blankets in all, (1 pr.) for each bed or bunk	½ doz. Tin plates, 10 knives & forks very bad
2 Lamps	2 Looking Glasses
1 Boat Lamp	1 Small flat boat
1 Cooking Stove & Fixtures say ½ worn	1 new arc and 2 old (of no use)

¹ Ltrs. Recd., C & O Co.

APPENDIX B

TOOLS, BOATS, AND MATERIALS
ON THE SENECA DIVISION 1870

A list of tools, boats, and materials belonging to the Chesapeake & Ohio Canal Company on the "Seneca Division"

Delivered to A. Thomas as follows [August 1, 1870]²

One small flat, 10 pr blankets—8 blankets—10 bed ticks, 7 pillow ticks, 10 pillow slips—26 sheets—2 table cloths, 5 towels, 2 curtain mosquito bar, 15 knives, 8 forks, 8 tea spoons, 7 table spoons, 6 buckets, 6 tin cups, 29 plates, 22 cups and 15 saucers, 3 molasses cans, 2 sugar bowls, 1 bowl, 2 milk pots—2 coffee mils, 3 jugs, 1 pitcher, 3 boxes—2 trays—1 polling pin—2 oil cans—tin lantern—dish pan—4 tin plated—2 coffee pots—1 cooking stove & fixtures—2 lamps—1 clock—3 tables—3 chairs—6 benches—4 stools—office stove—Bow lamp—wash pan—3 Sad irons—Bed Stead in office—oil cloth—3 axes—1 hatchet, 2 wash tubs—1 grind stone—2 striking hammers—1 set blocks & rope, 4 cross bars, 2 pinch bars—1 lamping bar, 15 shovels—6 picks—8 wheel barrows—3 spawling hammers—2 sledges—1 tool chest—2 locks—1 water keg—390 rails—62 post 1 hand made scoop in good repair—1 old stove.

1 Dirt scow, 1 large flat, 1 house boat, 2 pumps—want repairing—1 blanket, 1 towel—3 knives—2 butcher knives, 4 forks—6 spoons—1 canister—2 dish pans—1 tin bucket, 2 coffee pots—2 lamps, 2 pans—1 shovel, nearly worn out.

13 Heel posts—11 tow posts—2 marking sticks, 19 beams—146 arms—3 pieces 4x5 yellow pine—250 ft. 1 in. oak—200 ft. 1 in. pine—100 ft. ¾ in. oak—150 ft 3 in. oak—50 ft 1½ in. oak—1 piece 6x10—5 trussels—400 ft 2 in. white pine, lock & key—work bench—2 bench screws 1 cross cut saw—1 boring machine—7 augers—1 Canal stamp—2 bars iron 1 wrench—2 axes—2 crow bars set shear polls & rig—½ bbl. Pitch—bale oakum, 2 timber jacks and 4 rollers—1 cant hook—1 ladder—one grab hook—1 grind stone—2 buckets, 1 cup—22 bolts—5 new pivots—1 old pivot—3 new pots—5 old pots—4 new frames & paddles—1 frame—200 old bolts—T.C.L.s & taps—3½ keys, spikes, 40 nails—1 oil can, 1 brush, 2 hoes—3 sets cast gears—3 jumper drills, 1 churn drill, 5 hand drills—1 scraper—about 1500 old railing iron—2 old shovels—3 house casts, 1 stone truck—1 ring mall about 1000 ft., old lumber, 7 wheel barrows—2 new stone barrows—2 old stone barrows—1 old grout box—3 old barrows worth nothing—3 pumps nearly worn out.

² Ltrs. Recd., C & O Co.

APPENDIX C

REPORT ON CANAL TELEPHONE LINE, SEPTEMBER 27, 1879³

The undersigned committee appointed at the last meeting of the Board of Directors held in Annapolis to examine and inspect the "Telephone" recently constructed under your direction by Mr. Morrison, from Georgetown to Cumberland, and also to examine and inspect the re-building of Dam No. 4 which was washed away by the floods in the Potomac in the year 1877, beg leave to submit the following report:

In company with Mr. Morrison we examined a large portion of the "Telephone" line constructed by him, and now in use, and find the number of poles to the mile to be thirty (30) of good solid chestnut timber, twenty five (25) feet high of an average size of six (6) inches at the upper end, well set in the embankment, on straits four and one half ($4\frac{1}{2}$) feet deep and on curves five (5) feet in clay driven foundations except in crossings over Railroads, or county Bridges or other obstructions, in the way of the line where they range from thirty five (35) to forty and forty-five (40–45) feet in height in order to clear the line from all possible contact with such obstructions. At Big Slack Water the line changes from the towpath to the berm side of the Canal and instead of using poles, which was impossible owing to the change from the towpath to the berm side, the wire is strung on iron arms or brackets, securely fastened in the rock on the berm side of the canal, a distance of four (4) miles, and then recrosses to the towpath. The wire used in its construction is galvanized No. 9 gauge regular standard Telegraph wire fulfilling all the Electrical conditions of first class material, placed on the poles by screw glass insulators, or brackets, secured to poles by six (6) inch spikes. All line wire points firmly soldered at the ends in the most approved manner. The instruments are connected with the main line by No. 14 gauge copper wire passing through hard rubber tubes through the wall of the Telephone building and soldered to the line wire and side. The entire line is worked by five (5) cells gravity battery placed at each Telegraph Station, ten (10) additional cells of the same character at terminal points. The Telephone is a carbon transmitter "Edison's Patent."

The simple and easy method of communication by telephone adapts it peculiarly well to canal transportation service, and the facilities afforded to work and transportation on the canal must and will very soon dispense with a number of superintendents and other employees necessary under the present management. We have at different places along the line, test the method of communication between different points or stations, and find the line in good working order. Mr. Morrison, who constructed the line, under your direction, accompanied us for the purpose of explaining the manner of operating the line, and to him we are indebted for so much instructing information on the subject.

At the big tunnel an additional line is constructed over the hill from the first lock, east end of tunnel to the watch box at the west end of the tunnel, affording additional facilities for the passage of boats through the tunnel.

³

Proceedings of the President and Board of Directors, N, pp. 92–93.

APPENDIX D

REPORT ON TELEPHONE LINE, NOVEMBER 1, 1879⁴

Under instructions from your Board during the year 1878, I made a complete survey of the Chesapeake & Ohio Canal, for the purpose of constructing a Telegraph line and establishing stations at proper points for the transaction of the company's business and to expedite the making of repairs when necessary.

In January of the current year, I reported to you that if the line of poles put up by the Superintendents of Divisions on the Canal could be used, that the cost of putting up the wire including line wire insulation etc. would be in round numbers about \$14,000.

From time to time poles have been erected on which it was proposed to place the wires. In March of the current year however, under your direction I made an inspection of the poles and condition of the work and found that the poles already up were too light for the purpose for which they were intended. It was therefore deemed expedient to supply entirely new poles which would not only carry wires to provide for the addition of other wires from time to time as the wants of the company might require. I also found that the dense growth of timber along the canal necessitated the employment of gangs of men other than those engaged in construction to open the way for the building of the line. I began work on the 12th day and completed and put the line in service through its entire length on the first of October. Although it was not until the 31st of the same month that the line was cleared of trees and overhanging brush and placed in perfect condition. The original plan for a Telegraph line was abandoned because of the cost of skilled Telegraph operators and telephones were put in, in which are now being successfully worked by the Lock-tenders and other canal employees. Every assistance was rendered by the officers and employees of the canal company to expedite the work, men and materials were promptly supplied and in little over five months a line was constructed which from the difficulties to be overcome would ordinarily have taken at least double that time. In many places the only foot hold we could obtain for the poles was by drilling into the solid rock. In spite of this, and other difficulties, the work was completed in the short time above mentioned. The canal company is now in possession of one of the best telegraph lines.

The following description of the work material and equipment will give you a proper understanding of the character of the line. The poles are Chestnut timber not less than six inches at the top, twenty five feet high on the plains with from thirty to forty five feet high at crossings and other places when required.

The average depth in the ground is four & one half feet, except in curves and strains when from five to six feet set was given them. They are set in driven clay and every precaution taken to prevent them caving in on curves. White oak brackets fastened to the poles with six inch spikes support the glass insulators upon which the line wire is securely fastened with tie wire of its own gauge. The line wires are No. nine galvanized wire and stood all the standard tests for conducting tensile strength &c. The equivalent consists of Forty Eight "Edison Universal telephones" comprising Transmitter, Desk Pony, Crown Receiver Switch Key, Signal Bell and Relay. The Battery consists of four hundred cells of "Calland Gravity Battery" distributed as follows:

Georgetown	35 cells
Woods Lock	25 cells
Dam No. 4	15 cells
Dam No. 6	25 cells

⁴

Proceedings of the President and Board of Directors, N, pp. 93–97.

Cumberland	24 cells
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The remaining stations thirty eight in number have 195 cells distributed Five cells to each station where telephones are placed. The telephones are set up in the watch boxes and Lock keepers houses and connected to the outside line wire by No. four gauge insulated copper wire. Where the wires pass through the walls of these buildings hard rubber tubing is inserted through which they are passed to insure perfect insulation. All the wires and instruments are protected by lightning arresters connected to heavy copper plates which are buried in the damp earth at a proper depth to insure perfect ground connection. All the materials, and all the work, is of the very best description, and all the appliances which modern science has furnished has been applied to make the service as nearly perfect as possible.

Portions of the line have been in service since the middle of September and the entire line since the first of October. The officers of the canal report the service entirely satisfactory. In addition to the main line from the collector's office at Georgetown to the collector's office at Cumberland, I built and equipped two short auxiliary lines, one from the Consolidation Coal Company Wharf at Georgetown to Lock No. five a distance of six and one half miles, to be used for the purpose of regulating boats on the Georgetown level. The other over the Tunnel at Paw Paw, to be used for the purpose of regulating boats passing through the Tunnel.

The total number of poles used in the construction was

5,273 Twenty five feet long

24 Forty five feet long

13 Forty feet long

55 Thirty feet long

and three hundred poles twenty five feet long, span, distributed at different points along the line for repairs making a total of 5,665 poles.

69,300 lbs. of wire was used, including the wire for the auxiliary lines and tie wires.

7,500 screw glass insulators with 6,000 brackets.

The telephones are placed at the following named places:

Collectors office at Cumberland

Bodigan's Lock

Crawfis' Lock

Twiggs Lock

Darkey's Lock

West end of Tunnel

East end of Tunnel, Lock 66-1/3

Bells Lock

Ashkettes Lock

Dam No. 6

Murrays Lock

Brewers Lock

Ticis Lock

Sterlings' Shanty

Sir Johns Run

Williamsport

Hughes' Shanty

Moravey's Lock, Big Slack Water

Guard Lock Dam No. 4

Burgans Shanty
Deloney's Lock
Marrows Shanty
Shepherdstown
Drennans House Boat
Zimmermans Lock
Strippeys Lock
Harpers Ferry
Superintendent Moore's Office
McKernan's Lock
Berlin
Maumons Lock
Woods Lock, Head of nine mile level
Whites Ferry
Lock at head of Eight mile level
Seneca Feeder Lock
Great Falls
Moon's Lock
Outlet Lock
Browning's Shanty
Collector's Office, Georgetown
Winship's Office, Consolidation Coal Cos. Office
Dam No. 5

At Georgetown (Collector's Office) and the station at the east end of the Tunnel two extra telephones were placed to work the auxiliary lines, making a total of Forty six telephones inserted. We have two span telephones on hand to be placed subject to order making a total of Forty Eight telephones.

For ordinary working the line is divided into three sections by switches placed at the following named points:

Dam No. 6
Dam No. 4
Woods Lock (head of nine mile level)

Three switches are so arranged that by a simple movement the whole line can be thrown together making a continuous circuit from Georgetown to Cumberland. To keep the line and instruments in order I recommend the employment of three line Repairers, who have been and are now employed in that capacity.

APPENDIX E

EMPLOYEES JULY 1, 1839

List of persons in the employment of the Chesapeake and Ohio Canal Company on the 1st July, 1839, with the compensation of each.⁵

Robert Barnard, treasurer and accountant, Washington, per annum	\$1,400.00	
John P. Ingle, clerk, Washington	1,800.00	
Thomas Fillebrown, jr., assistant clerk	1,000.00	
William E. Howard, assistant clerk	1,000.00	
George Costin, messenger	250.00	
		\$5,450.00
C. B. Fisk, Chief Engineer, entire line of canal	\$5,000.00	
John A. Byers, principal assistant, between	2,000.00	
Elwood Morris, principal assistant, Dam No. 6	2,000.00	
Charles H. Randolph, principal assistant	2,000.00	
Joshua Gore, principal assistant, Cumberland	2,000.00	
Israel Dickinson, assistant, Cumberland	1,200.00	
Henry M. Dungan, assistant, Cumberland	1,200.00	
Samuel H. Williams, assistant, Cumberland	1,200.00	
Thomas L. Patterson, assistant, Cumberland	1,200.00	
Clement W. Coote, assistant, Cumberland	1,000.00	
Robert P. Dodge, assistant, Cumberland	800.00	
J. A. Sorecki, draughtsman \$3 per day, Cumberland	1,277.50	
William H. Bryan, rodman, Cumberland	780.00	
Fitzhugh Coyle, rodman, Cumberland	720.00	
Benjamin T. Brannan, rodman, Cumberland	540.00	
James R. Young, rodman, Cumberland	540.00	
John T. Cox, rodman, Cumberland	540.00	
Thomas Gore, rodman, Cumberland	540.00	
John Buchanan, rodman, Cumberland	540.00	
John C. Howard, vol. Rodman, Cumberland	360.00	
Charles E. Weaver, rodman, Cumberland	360.00	
Fenton M. Henderson, rodman, Cumberland	360.00	
William T. Winsor, vol. rodmen, duty as chainman	360.00	
A. S. Bender, rodman, duty as chainman	360.00	
		\$26,877.50
Daniel Pierce, axeman, \$26 per month, Cumberland	\$312.00	
John Ogleton, axeman, \$26 per month, Cumberland	312.00	
John Doyle, chain and axeman, Cumberland	396.00	
George Stump, \$20 per month and found, Cumberland	396.00	
Abel T. Crabtree, equal, per year, Cumberland	396.00	
John H. Sargent, equal, per year, Cumberland	396.00	
		\$2,208.00

⁵ *Twelfth Annual Report* (1840), pp. 36–39.

William, (negro) \$15 per month, Cumberland	\$336.00	
David Knode, chainman, \$20 per month and found, No. 6	396.00	
Robert Gates, axeman, \$17 per month and found, Cumberland	360.00	
Samuel Chase, axeman, \$17 per month and found, Cumberland	360.00	
John Eberts, axeman, \$1 per day, Sundays included	360.00	
Thomas Maxwell, \$1 per day, Sundays included	365.00	
William Jones, \$1 per day, Sundays included	365.00	
		\$2,542.00
Alex. B. McFarland, superintendent of masonry, Cumberland	\$1,800.50	
*William Anderson, superintendent of masonry, Cumberland	681.50	
*Duncan Grant, superintendent of masonry, Cumberland	681.50	
*William Challoner, superintendent of masonry, Cumberland	681.50	
*Daniel Logan, superintendent of masonry, Cumberland	681.50	
*William Hurd, superintendent of masonry, Cumberland	681.50	
*James Turnbull, superintendent of masonry, Cumberland	681.50	
*James Ellis, superintendent of masonry, Cumberland	681.50	
*Joseph Knode, superintendent of masonry, Cumberland	547.50	
*Frederick C. R. Maus, superintendent of masonry, Cumberland	547.50	
*James Thompson, superintendent of masonry, Cumberland	547.50	
*Morgan Snively, superintendent of masonry, Cumberland	547.50	
*Thomas Snyder, superintendent of masonry, Cumberland	547.50	
*Lewis Bartlett, superintendent of masonry, Cumberland	547.50	
*James M. Cushing, superintendent of masonry, Cumberland	547.50	
*Reuben Hurle, Jr., superintendent of masonry, Cumberland	547.50	
*George Young, superintendent of masonry, Cumberland	730.00	
		\$11,680.50
Jas. Hilton, lock-keeper—Lock B, Washington	50.00	
Jas. O. Reiley, lock-keeper tide-locks, & locks 1, 2, 3 & 4, Georgetown	1,200.00	
Thos. B. Offut, lock-keeper, Lock No. 5 & Guard-lock No. 1	250.00	
J. Whelan, lock-keeper, Lock No. 6	150.00	
M. Hart, lock-keeper, Lock No. 7	150.00	
L. Barret, lock-keeper, Lock No. 8	150.00	
J. Y. Young, lock-keeper, Lock No. 9 & 10	200.00	
William Burgess, lock-keeper, Lock No. 11	150.00	
Fred. Metts, lock-keeper, Lock No. 12, 13 and 14	250.00	
Hez. Metts, lock-keeper, Lock No. 15 and 16	276.00	
Jos. Caldwell, lock-keeper, Lock No. 17 and 18	276.00	
Daniel Collins, lock-keeper, Lock No. 19 and 20 Crom.	200.00	
R. C. Field, lock-keeper, Lock No. 21	150.00	

* Assistant superintendents of masonry, who are paid at the rate of \$2 per day in the winter months, and \$2.25 the rest of the year, Sundays exclusive.

* Superintendents of sections at \$1.50 per day, Sunday's inclusive, with the exception of George Young, who receives \$2 per day, he being connected with the superintendence of Dam No. 8, in addition to his other duties.

M. F. Harris, lock-keeper, Lock No. 22	150.00	
		\$3,602.00
W. H. Hammondtree, lock-keeper, Lock No. 23 & Guard Lock No. 2	\$200.00	
C. H. Shanks, lock-keeper, Lock No. 24	150.00	
Asa Aud, lock-keeper, Lock No. 25, & Edwards Ferry outlet lock	250.00	
James Fitch, lock-keeper, Lock No. 26	150.00	
Thomas Waller, lock-keeper, Lock No. 27	150.00	
P. McGaughan, collector, Point of Rocks	300.00	
James Davis, lock-keeper, Lock No. 28	150.00	
William Waller, lock-keeper, Lock No. 29	175.00	
William Kuhn, lock-keeper, Lock No. 30, Berlin	100.00	
A. B. Ward, lock-keeper, Lock No. 31	175.00	
J. B. Shope, lock-keeper, Lock No. 32	175.00	
W. S. Elgin, lock-keeper & collector, Lock No. 33 & H. Ferry outlet L	300.00	
John Crowley, lock-keeper, Lock No. 34	175.00	
William McKay, lock-keeper, Lock 35, 36, Guard-lock No. 3, H. Ferry	300.00	
J. Kercheval, lock-keeper, Lock No. 37	150.00	
G. W. Hughes, lock-keeper, Lock No. 38 & river lock, Shepherdstown	200.00	
Joseph Gwyn, lock-keeper, Lock No. 39	150.00	
A. McCoy, lock-keeper, Lock No. 40	150.00	
L. R. Shaw, lock-keeper, Guard Lock No. 4, Dam No. 4	150.00	
Henry Boyd, lock-keeper, Lock No. 41 and 42	200.00	
M. Crisman, lock-keeper, Lock No. 43	150.00	
William Irwin, collector, Williamsport basin	400.00	
Jacob Morten, lock-keeper, Guard Lock No. 5	150.00	
		\$4,450.00
Philip Trammel, lock-keeper, Locks Nos. 45 and 46	200.00	
Daniel Brewer, lock-keeper, Locks Nos. 47, 48, 49 and 50	300.00	
Henry Rowland, lock-keeper, Lock No. 51 and 52	200.00	
Vacant, lock-keeper, Lock Mo. 53	150.00	
Vacant, lock-keeper, Guard Lock, Dam No. 6	150.00	
		\$1,000.00
J. Y. Young, superintendent from Georgetown basin to Edward's ferry	\$1,000.00	
William S. Elgin, superintendent, from thence to Harpers Ferry Falls	1,000.00	
George W. Rogers, superintendent, from Harpers Ferry to Dam No. 5	1,200.00	
John G. Stone, superintendent, from thence to Dam No. 6	1,200.00	
		\$4,400.00
		\$62,210.00
Western Survey party, (temporarily engaged)		
Jno. S. McColloh, acting assistant, entered service May 19, 1839, at		

\$66 2/3 per month		
Richard S. McColloh, rodman, entered service, June 8, 1839, at \$45 per month		
John Widener, chainman, entered service, May 24, at \$1 per day, Sundays inclusive		
John Paw, chainman, entered service, May 22, at \$1 per day, Sundays inclusive		
Samuel Davis, axeman, entered service June 2, 1839, at \$1 per day		
Thomas Taylor, axeman, entered service, May 22, 1839 at \$1 per day, Sundays inclusive		
<i>The cost of the "Western Survey" last year was \$1,029.37, viz:</i>		
Pay of F. Coyle, acting assistant, (while engaged on the "Western Survey") 3 2/3 months, at the rate of \$60 2/3 per month	\$244.44	
J. S. McColloh and R. S. McColloh, volunteer rodmen, 3 5/6 months, at \$30 per month	230.00	
Pay of hands and board	498.87	
Contingencies	56.06	
	\$1,029.37	
<i>President and Directors</i>		
Francis Thomas, President, \$3,000 per annum		
John J. Abert	<i>Directors—\$4 per day to each director during the time which he shall be actually engaged in the duties of his office, provided that such compensation does not exceed, in any one year, the sum of \$300.</i>	
Phineas Janney		
Thomas Perry		
James Carroll		
Jacob G. Davies		
Joseph White		
<i>Summary of annual expenses, as before stated, exclusive of President and Directors</i>		
At the office in Washington	\$5,450.00	
Engineers, axemen and chainmen	31,627.50	
Superintendents of masonry and sections	11,680.50	
Superintendents on the line finished	4,400.00	
Lock-keepers and collectors	9,052.00	
	\$62,210.00	
The pay of the party now temporarily employed in the survey of the Western section, is at the rate of \$2,800 per annum		

APPENDIX F

OFFICERS FEBRUARY 1, 1840

List of the officers of the Chesapeake and Ohio Canal Company, in service on the 1st day of February, 1840, with the rate of compensation paid to each.⁶

Francis Thomas, President (compensation per annum)	\$3,000.00
Jacob G. Davies,	
Robert P. Dunlop,	
Washington Duval,	
Phineas Janey,	
John W. Maury,	
Joseph White	
John P. Ingle, clerk	1,800.00
Robert Barnard, treasurer and accountant	1,400.00
Thomas Fillebrown, Jr., clerk	1,000.00
William E. Howard, assistant clerk	1,000.00
George Costin, messenger	250.00
Maximum compensation if each director shall receive \$300	\$9,250.00
John Y. Young, superintendent 1 st Division canal	\$800.00
William S. Elgin, superintendent 2 nd Division	800.00
George W. Rogers, superintendent 3 rd Division	800.00
John G. Stone, superintendent 4 th Division	800.00
Jas. O. Reiley, collector and keeper Locks Nos. 1,2,3,4	1,200.00
P. McGaughanm collector, Point of Rocks	300.00
William Irwin, collector, Williamsport	400.00
Arthur Blackwell, collector, Hancock	400.00
John P. Hilton, keeper of tide-lock B	50.00
Thomas B. Offut, keeper, Lock No. 5, and guard lock	250.00
James Dalzell, keeper, Lock No. 6	150.00
Michael Hart, keeper, Lock No. 7	150.00
Levi Barrett, keeper, Lock No. 8	150.00
John Y. Young, keeper, Lock No. 9 and 10	200.00
Weston Burgess, keeper, Lock No. 11	150.00
Frederick Metts, keeper, Lock No. 12, 13 and 14	250.00
Hezekiah Metts, keeper, Lock No. 15 and 16	276.00
Joseph Caldwell, keeper, Lock No. 17 and 18	276.00
Daniel Collins, keeper, Lock No. 19 and 20	200.00
R. C. Fields, keeper, Lock No. 21	150.00
M. F. Harris, keeper, Lock No. 22	150.00
W. H. Hammondtree, keeper, Lock No. 23 and guard	200.00
Charles H. Shanks, keeper, Lock No. 24	150.00
Asa Aud, keeper, Lock No. 25 and outlet	250.00

⁶ *Twelfth Annual Report* (1840), pp. 34–36.

James Fitch, keeper, Lock No. 26	150.00
Thomas Walter, keeper, Lock No. 27	150.00
James Davis, keeper, Lock No. 28	150.00
William Walter, keeper, Lock No. 29	175.00
William Kuhn, keeper, Lock No. 30	100.00
A. B. Ward, keeper, Lock No. 31, &c	175.00
J. B. Shope, keeper, Lock No. 32	175.00
W. S. Elgin, keeper, Lock No. 33 and collector	300.00
John Crowley, collector, Lock No. 34	175.00
William McKay, keeper, Lock No. 35, 36 and guard	300.00
John Kercheval, keeper, Lock No. 37	150.00
George Hughes, keeper, Lock No. 38 and outlet	200.00
Joseph Gwyn, keeper, Lock No. 39	150.00
Andrew McCoy, keeper, Lock No. 40	150.00
Levi R. Shaw, keeper, Guard Lock No. 4	150.00
Henry Boyd, keeper, Locks No. 41 and 42	200.00
Michael Chrisman, keeper, Lock No. 43	150.00
Joseph Hollman, keeper, Lock No. 44, water power	
Jacob Motter, keeper, Guard Lock No. 5	150.00
Phillip Trammell, keeper, Locks No. 45 and 46	200.00
Daniel Brewer, keeper, Locks No. 47, 48, 49 and 50	300.00
Upton Rowland, keeper, Locks No. 51 and 52umberland	200.00
H. Connwe, keeper, Lock No. 53	150.00
John Roberts, temporary, Guard Lock No. 6	456.00
Superintendents, collectors, and lock-keepers	\$12,958.00
Charles B. Fisk, Chief Engineer	\$4,000.00
Elwood Morris, principal assistant	2,000.00
Joshua Gore, principal assistant	2,000.00
Israel Dickinson, assistant	1,200.00
Hugh M. Dungan, assistant	1,200.00
Samuel H. William, assistant	1,200.00
Thomas L. Patterson, assistant	1,200.00
R. S. McColloh, rodman	540.00
Benjamin F. Branan, rodman	540.00
James R. Young, rodman	540.00
Fenton M. Henderson, rodman	540.00
, axeman	365.00
A. B. McFarland, superintendent of masonry	681.50
D. Logan, superintendent of masonry	681.50
Joseph Knode, superintendent of sections	547.50
Morgan Snively, superintendent of sections	547.50
Thomas Snyder, superintendent of sections	547.50

James M. Cushing, superintendent of sections	547.50
George Young, superintendent of sections	730.00
Wm. H. Brayan, commissioner and clerk in the office of the Chief Engineer	1,000.00
Engineers, commissioners, &c.	\$21,703.00
<i>Summary of yearly compensation.</i>	
The President, and Clerks, (if the directors receive the maximum of their compensation)	\$9,250.00
The superintendents, collectors, and lock-keepers	12,958.00
The engineers and commissioner	21,703.00
	\$43,911.00

Note: There are a few other officers in the service of the company at this time, but as their term of service will expire on the 1st of March next, they are not entered on this list.

APPENDIX G

OFFICERS, ENGINEERS, AND AGENTS APRIL 2, 1841

List of the officers, engineers, and agents in employ of the Chesapeake & Ohio Canal Company, on the 2nd day of April, 1841, the day on which the present Board of President and Directors were elected, with the rate of compensation paid to each annually.⁷

Francis Thomas, (president) compensation per annum	\$3,000
Dr. William Tyler,	
Jacob Markell,	
John McPherson,	
Robert P. Dunlop,	
James Swan,	
William Lucas	
Thomas Turner, clerk	1,800
Edward Shriver, assistant clerk	1,000
Ezra Kouck, collector general of tolls	1,000
Samuel Tyler, treasurer and accountant	1,400
Albert Maybury, messenger	200
	10,200
Elwood Morris, chief engineer 1 st Division canal	\$4,000
Henry M. Dungan, assistant engineer	1,200
Thomas L. Patterson, assistant engineer	1,200
Jacob C. Schnebly, rodman	540
Benjamin F. Brennan, rodman	540
Two chain and axeman	730
Samuel M. Semmes, commissioner	1,000
	9,210
John Y. Young, superintendent 1 st division	\$800
William O'Neale, superintendent 2 nd division	800
John D. Grove, superintendent 3 rd division	800
Joseph Hololman, superintendent 4 th division	800
Benjamin F. Mackall, collector of tolls at Georgetown	800
P. McGaughan, collector of tolls at Point of Rocks	800
William McKepler, collector of tolls at Williamsport	400
Arthur Blackwell, collector of tolls at Hancock	400
John Hilton, keeper of Lock B	50
James O'Riley, keeper of locks Nos. 1, 2, 3 and 4	500
Thomas B. O'Offutt, keeper of lock No. 5 and guard lock	250
James Dalzell, keeper of lock No. 6	150
Michael Hart, keeper of lock No. 7	150
Levi Barrett, keeper of lock No. 8	150
Osbourn Crawford, keeper of locks No. 9 and 10	200
Wilton Burgess, keeper of Lock No. 11	150

⁷ *Fourteenth Annual Report* (1842), pp. 24–25.

Frederick Metts, keeper of locks No. 12, 13 and 14	250
Hezekiah Metts, keeper of locks No. 15 and 16	276
William H. Henderson, keeper of locks Nos. 17 and 18	276
D. Collins, keeper of locks Nos. 19 and 20	\$200
Robert C. Fields, keeper of lock No. 21	150
John Fields, keeper of lock No. 22	150
William H. Hammontru, keeper of lock No. 23 and guard lock	200
Charles H. Shanks, keeper of lock No. 24	150
Asa Aud, keeper of lock No. 25 and outlet	250
James Fitch, keeper of lock No. 26	150
Thomas Walter, keeper of lock No. 27	150
James Davis, keeper of lock No. 28	150
John Walter, keeper of lock No. 29	175
W. Kuhn, keeper of lock No. 30	100
Dennis Harrison, keeper of lock No. 31, &c.	175
A. W. Jones, keeper of lock No. 32	175
W. S. Elgin, keeper of lock No. 33 and collector of tolls	300
John Crowley, keeper of lock No. 34	175
William McKay, keeper of locks Nos. 35, 36 and guard	300
John Kerchwell, keeper of lock No. 37	150
George Hughes, keeper of lock No. 38 and outlet	200
Joseph Gwyn, keeper of lock No. 39	150
Andrew McKoy, keeper of lock No. 40	150
Levi R. Shaw, keeper of guard lock No. 4	150
Henry Boyd, keeper of locks Nos. 41 and 42	200
Michael Crisman, keeper of lock No. 43	150
Joseph Hollman, keeper of lock No. 44—water power granted	
Jacob Motter, keeper of guard lock No. 5	150
John Herbert, keeper of locks Nos. 45 and 46	200
Daniel Brewer, keeper of locks Nos. 47, 48, 49 and 50	300
Upton Rowland, keeper of locks No. 51 and 52	200
H. Conner, keeper of lock No. 53	150
Thomas Fleming, keeper of guard lock No. 6	175
Superintendents, collectors and lock-keepers	12,777
Summary	
The President, and Clerks, (\$300 each Director)	\$10,200
Engineers, rodmen, axemen and commissioners	9,210
Superintendents, collectors and lock-keepers	12,777
Total	32,187

THO. TURNER,
Clerk of the Chesapeake and Ohio Canal Company.

APPENDIX H

OFFICERS JUNE 1, 1841

List of the officers of the Chesapeake & Ohio Canal Company, in service on the 1st day of June, 1841, with the rate of compensation paid to each annually.⁸

Michael C. Sprigg, (president) compensation per annum	\$3,000
James M. Coale	
John P. Ingle	
Frisby Tilghman	
John T. Dale	
Daniel Burkhardt	
John O. Wharton	
Thomas Turner, clerk	1,800
Robert Barnard, treasurer and accountant	1,400
Ezra Houck, collector general of tolls	1,000
Albert Mayberry, messenger	200
	\$9,200
John Y. Young, superintendent 1 st division canal	\$800
William S. Elgin, superintendent 2 nd division canal	800
George W. Rodgers, superintendent 3 rd division canal	800
John G. Stone, superintendent 4 th division canal	800
Benjamin F. Mackall, collector at Georgetown	800
Henry Jamison, collector at Point of Rocks	200
Elie Stake, collector at Williamsport	300
Arthur Blackwell, collector at Hancock	300
John B. Hilton, keeper of Lock B	50
James O'Riley, keeper of locks Nos. 1, 2, 3 and 4	500
Thomas B. O'Offutt, keeper of lock No. 5 and guard lock	250
James Dalzell, keeper of lock No. 6	150
Michael Hart, keeper of lock No. 7	150
Levi Barrett, keeper of lock No. 8	150
Osborn Crawford, keeper of locks No. 9 and 10	200
Wilton Burgess, keeper of Lock No. 11	150
Frederick Metts, keeper of locks No. 12, 13 and 14	250
Hezekiah Metts, keeper of locks No. 15 and 16	276
William H. Henderson, keeper of locks Nos. 17 and 18	276
Daniel Collins, keeper of locks Nos. 19 and 20	200
Robert C. Fields, keeper of lock No. 21	150
John Fields, keeper of lock No. 22	150
W. H. Hammontree, keeper of lock No. 23 and guard lock	200
Charles H. Shanks, keeper of lock No. 24	150
Asa Aud, keeper of lock No. 25 and outlet	250

⁸ *Thirteenth Annual Report* (1841), pp. 85–87.

James Fitch, keeper of lock No. 26	150
Thomas Walter, keeper of lock No. 27	150
James Davis, keeper of lock No. 28	150
John Walter, keeper of lock No. 29	175
William Kuhn, keeper of lock No. 30	100
Dennis Harrison, keeper of lock No. 31, &c.	175
A. W. Jones, keeper of lock No. 32	175
William S. Elgin, keeper of lock No. 33 and collector	300
John Crowley, keeper of lock No. 34	175
William McKay, keeper of locks Nos. 35, 36 and guard	300
John Kerchwell, keeper of lock No. 37	150
George Hughes, keeper of lock No. 38 and outlet	200
Joseph Gwyn, keeper of lock No. 39	150
Andrew McKoy, keeper of lock No. 40	150
Levi R. Shaw, keeper of guard lock No. 4	150
Henry Boyd, keeper of locks Nos. 41 and 42	200
Michael Crisman, keeper of lock No. 43	150
Joseph Hollman, keeper of lock No. 44—water power granted	
Jacob Motter, keeper of guard lock No. 5	150
John Herbert, keeper of locks Nos. 45 and 46	200
Daniel Brewer, keeper of locks Nos. 47, 48, 49 and 50	300
Upton Rowland, keeper of locks No. 51 and 52	200
H. Conner, keeper of lock No. 53	150
Thomas Fleming, keeper of guard lock No. 6	456
Superintendents, collectors and lock-keepers	\$12,758
Charles B. Fisk, chief engineer	\$3,000
John A. Byers, assistant	1,100
Charles H. Randolph, assistant	1,100
Henry M. Dungan, assistant	1,100
Samuel H. Williams, assistant	1,100
Thomas L. Patterson, assistant	1,100
Thomas Gore, rodman	500
Fenton M. Henderson, rodman	500
Jacob L. Schnebly, rodman	500
John J. Buchanan, Jr., rodman	500
William J. Bryan, rodman	500
Axeman	300
Samuel M. Semmes, commissioner	1,100

	\$14,000
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Summary of yearly compensation

The President, directors and Clerks, (if the directors receive the maximum of their compensation)	\$9,200
The superintendents, collectors and lock-keepers	12,758
The engineers and commissioner	<u>14,400</u>
Total	<u><u>\$36,358</u></u>

Or thus:

The president, directors and clerks (if the directors receive the maximum of their compensation)	\$9,200
4 superintendents	\$3,200
45 collectors and lock-keepers	<u>9,558</u>
	12,758
1 chief engineer	3,000
5 assistant engineers	5,500
5 rodmen	2,500
8 axemen	<u>2,400</u>
	13,400
1 commissioner	1,000
	<u><u>\$36,358</u></u>

APPENDIX I

OFFICERS, ENGINEERS, AND AGENTS JANUARY 1, 1842

List of the officers, engineers, and agents in the service of the Chesapeake & Ohio Canal Company, on the 1st day of January, 1842, with the rate of compensation paid to each annually.⁹

Francis Thomas, President	\$1,000
James M. Coale, Frisby Tilghman, J. P. Ingle, J. R. Dall, J. O. Wharton, D. Burkhart,	Director —\$4 per day to each, during the time he shall be actually engaged in the duties of his office, provided the pay of each director shall not exceed 300 dollars per annum.
Thomas Turner, clerk and superintendent of tolls	1,500
Robert Barnard, treasurer and accountant	1,200
	Total 5,500
Charles B. Fisk, chief engineer	\$3,000.00
John A. Byers, assistant engineer	1,100.00
Charles H. Randolph, assistant engineer	1,100.00
Henry M. Dungan, assistant engineer	1,100.00
Samuel H. Williams, assistant engineer	1,100.00
Thomas L. Patterson, assistant engineer	1,100.00
Thomas Gove, rodman	500.00
Jacob C. Schnebly, rodman	500.00
John Buchanan, Jr., rodman	500.00
William H. Bryan, rodman	500.00
R. Lorman Ross, rodman	360.00
four axemen	1,110.00
Morgan Snively, superintendent at tunnel, and axeman, \$1.50 per day	547.50
Amauel M. Semmes, commissioner	200.00
	12,717.50
John Y. Young, superintendent 1 st division	\$700
William S. Elgin, superintendent 2 nd division	700
George W. Rodgers, superintendent 3 rd division	700
John G. Stone, superintendent 4 th division	700
Benjamin F. Mackall, collector of tolls at Georgetown	600
Henry Jamison, collector of tolls at Point of Rocks	200
Eli Stake, collector of tolls at Williamsport	300
Arthur Blackwell, collector of tolls at Hancock	300
John Hilton, keeper of Lock B, at Washington	50
James O'Riley, keeper of locks Nos. 1, 2, 3 and 4	600
Thomas B. Offutt, keeper of lock No. 5 and guard lock	250
James Dalzell, keeper of lock No. 6	150
Michael Hart, keeper of lock No. 7	150

⁹ *Fourteenth Annual Report* (1842), pp. 25–27.

Levi Barrett, keeper of lock No. 8	150
Osbourne Crawford, keeper of locks No. 9 and 10	200
Wilton Burgess, keeper of Lock No. 11	150
Frederick Metts, keeper of locks No. 12, 13 and 14	250
Hezekiah Metts, keeper of locks No. 15 and 16	\$276
William H. Henderson, keeper of locks Nos. 17 and 18	276
Daniel Collins, keeper of locks Nos. 19 and 20	200
Robert C. Fields, keeper of lock No. 21	150
John Fields, keeper of lock No. 22	150
William H. Hammontree, keeper of lock No. 23 and guard lock	200
Charles H. Shanks, keeper of lock No. 24	150
Asa Aud, keeper of lock No. 25 and outlet	250
James Fitch, keeper of lock No. 26	150
Thomas Walter, keeper of lock No. 27	150
James Davis, keeper of lock No. 28	150
John Walter, keeper of lock No. 29	175
Dennis Harrison, keeper of lock No. 30	175
Wm. Kuhn, keeper of lock No. 31	100
A. W. Jones, keeper of lock No. 32	175
W. S. Elgin, keeper of lock No. 33 and collector of tolls	300
John Crowley, keeper of lock No. 34	175
William McKay, keeper of locks Nos. 35, 36 and guard	300
John Kerchwell, keeper of lock No. 37	150
George Hughes, keeper of lock No. 38 and outlet	200
Joseph Gwyn, keeper of lock No. 39	150
Andrew McKoy, keeper of lock No. 40	150
Levi R. Shaw, keeper of guard lock No. 4	150
Henry Boyd, keeper of locks Nos. 41 and 42	200
Michael Crisman, keeper of lock No. 43	150
Joseph Hollman, keeper of lock No. 44—water power granted	
Jacob Motter, keeper of guard lock No. 5	150
John Herbert, keeper of locks Nos. 45 and 46	200
Daniel Brewer, keeper of locks Nos. 47, 48, 49 and 50	300
Upton Rowland, keeper of locks No. 51 and 52	200
H. Conner, keeper of lock No. 53	150
Thomas Fleming, keeper of guard lock No. 6	175
Total, Superintendents, collectors and lock-keepers	11,977
Summary	
The President, Directors, and Clerks, (\$300 each Director)	\$5,500.00
Engineers, rodmen, axemen and commissioners	12,717.50
Superintendents, and lock-keepers, and collectors	11,977.00
Total	\$30,194.50

THO. TURNER,
Clerk of the Chesapeake and Ohio Canal Company.

APPENDIX J

OFFICERS MAY 31, 1842

List of the officers in the service of the Chesapeake & Ohio Canal Company, on the 31st day of May, 1842, with the rate of compensation paid to each annually.¹⁰

Michael C. Sprigg, President	\$1,000
James M. Coale,	
Frisby Tilghman,	
John R. Dall,	
John O. Wharton,	
Daniel Burkhart,	
John P. Ingle	
Thomas Turner, clerk and superintendent of tolls	1,500
Robert Barnard, treasurer and accountant	1,200
Total	5,500
Charles B. Fisk, chief engineer	\$2,000
Henry M. Dungan, assistant engineer	1,100
Total	3,100
John Y. Young, superintendent 1 st division	\$700
William S. Elgin, superintendent 2 nd division	700
George W. Rodgers, superintendent 3 rd division	700
John G. Stone, superintendent 4 th division	700
Total	2,800
Benjanin F. Mackall, collector of tolls at Georgetown	600
Henry Jamison, collector of tolls at Point of Rocks	200
William S. Elgin, collector of tolls, Harper's Ferry	300
Elie Stake, collector of tolls, Williamsport	300
Arthur Blackwell, collector of tolls at Hancock	300
Total	1,700
John Hilton, keeper of Lock B, at Washington	50
James O'Riley, keeper of locks Nos. 1, 2, 3 and 4, Georgetown	600
Thomas B. Offutt, keeper of lock No. 5 and guard lock	250
James Dalzell, keeper of lock No. 6	150
Michael Hart, keeper of lock No. 7	150
Levi Barrett, keeper of lock No. 8	150
Osbourn Crawford, keeper of locks No. 9 and 10	200
Wilton Burgess, keeper of Lock No. 11	150
Frederick Metts, keeper of locks No. 12, 13 and 14	250
Hezekiah Metts, keeper of locks No. 15 and 16	276
William H. Henderson, keeper of locks Nos. 17 and 18	276
Daniel Collins, keeper of locks Nos. 19 and 20	200
Robert C. Fields, keeper of lock No. 21	150
John Fields, keeper of lock No. 22	150

¹⁰ *Fourteenth Annual Report* (1842), pp. 25–27.

William H. Hammontree, keeper of lock No. 23 and guard lock	200
Charles H. Shanks, keeper of lock No. 24	150
Asa Aud, keeper of lock No. 25 and outlet	250
James Fitch, keeper of lock No. 26	150
Thomas Walter, keeper of lock No. 27	\$150
James Davis, keeper of lock No. 28	150
John Walter, keeper of lock No. 29	175
Dennis Harrison, keeper of lock No. 30	175
William Kuhn, keeper of lock No. 31	100
A. W. Jones, keeper of lock No. 32	175
John Crowley, keeper of lock No. 34	175
William McKay, keeper of locks Nos. 35, 36 and guard	300
John Kerchwell, keeper of lock No. 37	150
George Hughes, keeper of lock No. 38 and outlet	200
Joseph Gwyn, keeper of lock No. 39	150
Andrew McKoy, keeper of lock No. 40	150
Levi R. Shaw, keeper of guard lock No. 4	150
Henry Boyd, keeper of locks Nos. 41 and 42	200
Michael Crisman, keeper of lock No. 43	150
Joseph Hollman, keeper of lock No. 44—water power granted	
Jacob Motter, keeper of guard lock No. 5	150
John Herbert, keeper of locks Nos. 45 and 46	200
Daniel Brewer, keeper of locks Nos. 47, 48, 49 and 50	300
Upton Rowland, keeper of locks No. 51 and 52	200
H. Conner, keeper of lock No. 53	150
Thomas Fleming, keeper of guard lock No. 6	175
Total	\$7,477
Total	\$20,577
RECAPITULATION	
President, Directors, clerks, and treasurer	\$5,500.00
Engineer and assistant	3,100
Superintendents	2,800
Collectors of tolls	1,700
Lock-keepers	7,477
Total	20,577

THO. TURNER,
Clerk of the Chesapeake and Ohio Canal Company
 Canal Office, Frederick, May 31, 1842.

Note. The aggregate pay for the directors for the year ending 31st May, 1842, was \$924.

APPENDIX K

OFFICERS MAY 31, 1845

Schedule of officers in the service of the Chesapeake & Ohio Canal Company in the year ending 31st May, 1845, and the compensation to which they have been severally entitled.¹¹

	Name of officer, &c.	Amount
1 st	In the office at Frederick, viz:	
	James M. Coale, President, per annum	\$1,000
	D. Burkhart, attendance as director	136
	William Darne, attendance as director	112
	J. P. Ingle, attendance as director	192
	William Price, attendance as director	64
	F. Tilghman, attendance as director	160
	J. O. Wharton, attendance as director	136
		800
	Thomas Turner, clerk, per annum	1,500
	Robert Barnard, treasurer and accountant	1,200
	William Price, standing counsel	250
	C. B. Fisk, chief engineer	2,000
		\$6,750
2 nd	First superintendency, viz:	
	J. Y. Young, superintendent	800
	B. F. Mackall, collector	600
	John Moore, keeper locks 1 to 4, and tide	600
	Frederick Metz, keeper lock 5 and guard	250
	James Dalzell, keeper lock 6	150
	James Wilburn, keeper lock 7	150
	Levi Barrett, keeper lock 8	150
	O. S. Crawford, keeper locks 9 and 10	200
	W. Burgess, keeper lock 11	150
	Asa Tarman, keeper locks 12, 13 and 14	150
	Hezekiah Metz, keeper lock 15	12.50
	William Nevitt, keeper lock 15	137.50
		150
	Thomas Brewer, keeper lock 16	150
	W. W. Henderson, keeper locks 17 and 18	138.00
	Horrace Benton, keeper locks 17 and 18	138.00
		276
	Daniel Collins, keeper locks 19 and 20	200
	R. C. Fields, keeper lock 21	150
	John Fields, keeper lock 22	150
	J. Y. Young, keeper lock 23 and guard	200
	John Wells, keeper lock 24	150

¹¹ *Seventeenth Annual Report* (1845), pp. 9–10.

	Asa Aud, keeper Edwards Ferry outlet		50	
				4,776
3 rd	Second superintendency			
	W. S. Elgin, superintendent		800	
	L. C. Belt, Point of Rocks, collector		50	
	W. S. Elgin, Harpers Ferry, collector		100	
	Asa Aud, keeper lock 25		200	
	James Fitch, keeper lock 26		150	
	Thomas Walter, keeper lock 27		150	
	E. Davis, keeper lock 28	125.00		
	John Plummer, keeper lock 28	25.00		
			150	
	John Walter, keeper lock 29		175	
	William Kuhn, keeper lock 30		150	
	D. Harrison, keeper lock 31		150	
	A. W. Jones, keeper lock 32		175	
	W. S. Elgin, keeper lock 33 and Shenandoah		200	
	John Crowley, keeper lock 34		175	
	John Kercheval, keeper locks 35 and guard, &c.		250	
	J. L. Jordon, keeper lock 37		150	
	George Hughes, keeper lock 38 and outlet	83.33		
	Edward Hayes, keeper lock 38 and outlet	116.67		
			200	
	Joseph Gwyn, keeper lock 39		150	
	Andrew McKoy, keeper lock 40		150	
	L. R. Shaw, keeper guard lock 4		150	
	M. Newman, bridge and ferry tender, Noland's Ferry		150	
				3,825
4 th	Third superintendency, viz:			
	John G. Stone, superintendent		800	
	Eli Stake, Williamsport, collector		300	
	Arthur Blackwell, Hancock, collector		300	
	Henry Boyd, keeper locks 41 and 42		200	
	Isaac Dodd, keeper lock 43		150	
	Joseph Hollman, keeper lock 44, (water power)			
	Jacob Motter, keeper guard 5		150	
	John Herbert, keeper locks 45 and 46	100.00	200	
	Henry Harsh, keeper locks 45 and 46	100.00		
			200	
	Daniel Brewer, keeper locks 47 to 50		300	
	Upton Rowland, keeper locks 51 and 52		200	
	Hugh Conner, keeper lock 53		150	
	James Finney, keeper guard 6		200	
				2,950
				18,301

RECAPITULATION				
President, directors, and clerks at Frederick				\$4,750
Chief Engineer				2,000
Superintendents				2,400
Collectors				2,400
Lock-keepers				7,801
Total				18,301

THO. TURNER, *Clerk.*

APPENDIX L

OFFICERS DECEMBER 31, 1846

Showing the Officers in the service of the Chesapeake & Ohio Canal Company in the year ending 31st December, 1846, and the compensation to which they have been severally entitled for same period.¹²

1 st	James M. Coale, president			\$3,000.00	
	Daniel Burkhart, Director		\$176.00		
	R. W. Bowie, Director		196.00		
	John P. Ingle, Director		196.00		
	William Price, Director		192.00		
	Frisby Tilghman, Director		170.00		
	John O. Wharton, Director		176.00		
				1,106.00	
2 nd	Thomas Turner, Clerk, to 20 th Dec.	\$1,120			
	Walter S. Ringgold, since	30			
			1,150.00		
	F. B. Sappington, Assistant Clerk, to 1 st July		366.66		
	Robert Barnard, Treasures, to February	117.20			
	Philemon Chew, Treasurer, to 15 th April	200.00			
	L. J. Brengle, since,	800.55			
			1,117.75		
	William Price, standing counsel		250.00		
	C. B. Fisk, Chief Engineer		2,500.00		
				5,384.41	
					\$9,490.41
3 rd	First superintendency				
	William S. Elgin, superintendent		400.00		
	C. Hogmire, collector to 1 st April	\$350			
	W. H. Bryne, since	250			
			600.00		
	John Moore, keeper of locks 1 to 4		600.00		
	Frederick Metz, keeper lock 5, &c.		200.00		
	James Delzell, keeper lock 6		150.00		
	James Wilburn, keeper lock 7		150.00		
	Levi Barrett, keeper lock 8		150.00		
	O. Crawford, keeper locks 9 and 10		200.00		
	W. H. Burgess, keeper lock 11		150.00		
	Asa Tarmar, keeper lock 15		175.00		
	William Nevett, keeper locks 12, 13 and 14		250.00		
	Thomas Brewer, keeper lock 16		175.00		
	Horace Benton, keeper locks 17 and 18		225.00		
	Daniel Collins, keeper locks 19 and 20		200.00		

¹² *Nineteenth Annual Report* (1847), pp. 19–20.

	Samuel Fisher, keeper lock 21		150.00		
	John Fields, keeper lock 22		150.00		
	E. L. Trail, keeper lock 23		200.00		
	John Wells, keeper lock 24		150.00		
	Asa Aud, keeper Edwards Ferry outlet		50.00		
				4,325.00	
					4,325.00
4 th	Second superintendency				
	William S. Elgin, superintendent			\$800.00	
	Lloyd C. Belt, collector		\$50.00		
	William S. Elgin, collector, Harpers Ferry		100.00		
				150.00	
	Asa Aud, keeper lock 25		200.00		
	James Fitch, keeper lock 26		150.00		
	Thomas Walter, keeper lock 27		150.00		
	John Plummer, keeper lock 28		150.00		
	John Walter, keeper lock 29		175.00		
	William Kughn, keeper lock 30		150.00		
	D. Harrison, keeper lock 31		150.00		
	A. W. Jones, keeper lock 32		175.00		
	W. S. Elgin, keeper lock 33, &c.		200.00		
	John Crowley, keeper lock 34		175.00		
	J. Kircheval, keeper lock 35, &c.		250.00		
	J. L. Jordan, keeper lock 37		150.00		
	Edward Havs, keeper lock 38, &c.		200.00		
	Joseph Gwinn, keeper lock 39		150.00		
	A. McCoy, keeper lock 40		150.00		
	J. Buchanan, guard lock 4		150.00		
	W. Watkins, ferry		150.00		
				2,875.00	
					3,825.00
5 th	Third superintendency				
	John G. Stone, superintendent			800.00	
	Eli Stake, collector		300.00		
	Arthur Blackwell, collector		300.00		
				600.00	
	Henry Boyd, keeper of locks 41 and 42		200.00		
	Isaac Dodd, keeper of lock 43		150.00		
	C. Myers, keeper locks 45 and 46		200.00		
	Jacob Morter, keeper guard lock 5		150.00		
	Daniel Brewer, keeper locks 47,48,49 and 50		300.00		
	W. Rowland, keeper locks 51 and 52		200.00		

	H. Conner, keeper lock 53		150.00		
	James Phinney, keeper guard lock 6		200.00		
				1,550.00	
					2.950.00
					\$20,590.41

RECAPITULATION

President, Directors, Standing Counsel, Clerks and Chief Engineer	\$9,490.41
Superintendents	2,000.00
Collectors	1,350.00
Lock-keepers	<u>7,750.00</u>
	\$20,590.41

L. J. BRENGLE, *Treasurer.*
 Office Chesapeake and Ohio Canal Co.,
Cumberland, January 6, 1847

APPENDIX M

OFFICERS DECEMBER 31, 1848

Statement showing the Officers in the service of the Chesapeake & Ohio Canal Company in the year ending 31st December, 1848, and the compensation to which they have been severally entitled for same period.¹³

1 st	James M. Coale, President, salary at \$1,000 to 1 st August		\$586.07		
	Since at \$2,000		827.85		
				\$1,413.92	
	William A. Bradley, Director		132.00		
	George Schley, Director		132.00		
	Samuel P. Smith, Director		264.00		
	Henry Daingerfield, Director		72.00		
	William Cost Johnson, Director		84.00		
	John Pickell, Director		96.00		
				780.00	
	George Schley, Standing Counsel		200.00		
	Walter S. Ringgold, Chief Clerk, at \$1,000		1,000.00		
	Walter S. Ringgold, Sec. to Stockholders at \$100		100.00		
	Lawrence J. Brengle, Treasurer, at \$1000		1,000.00		
	F. B. Sappington, Asst. Clerk to 21 st July at \$500	254.18			
	F. D. Tormey, Asst. Clerk from 7 th Aug. at \$500	200.10			
			454.28		
				2754.28	
					4948.20
2 nd	First Superintendency				
	John Lambie, Superintendent			700.00	
	William H. Bryan, Collector at Georgetown		800.00		
	John Page, Inspector of Cargoes, Georgetown		300.00		
				1100.00	
	John Moore, Keeper of Locks 1 to 4		600.00		
	Frederick Metz, Keeper of Lock 5, &c.		200.00		
	James Delzell, Keeper of Lock 6		150.00		
	James Wilburn, Keeper of Lock 7		150.00		
	Levi Barrett, Keeper of Lock 8		150.00		
	John Lambie, Keeper of Locks 9 and 10		200.00		
	W. H. Burgess, Keeper of Lock 11		150.00		
	John T. Harrison, Keeper of Locks 12, 13 and 14		250.00		

¹³ Twenty-First Annual Report (1849), pp. 30–31.

	Rebecca Tarman, Keeper of Lock 15		175.00		
	Mary A. Brewer, Keeper of Lock 16		175.00		
	William D. Howser, Keeper of Locks 17 and 18		225.00		
	Daniel Collins, Keeper of Locks 19 and 20		200.00		
	Samuel Fisher, Keeper of Lock 21		150.00		
	John Fields, Keeper of Lock 22		150.00		
	Edward L. Trail, Keeper of Lock 23		200.00		
			3125.00		
				4925.00	
3 rd	Second superintendency				
	William S. Elgin, superintendent		900.00		
	Lloyd C. Belt, collector at Point of Rocks		\$50.00		
	William S. Elgin, collector at Harpers Ferry		100.00		
			150.00		
	John Wells, Keeper of Lock 24		150.00		
	Asa Aud, No. 25 th to the 1 st of June	\$111.11			
	George W. Bozzell, since	138.89			
			250.00		
	James Fitch, Keeper of Lock 26		150.00		
	Thomas Walter, Keeper of Lock 27		150.00		
	Galen Benton, No. 28 th to 1 st August	\$87.50			
	William Watkins, since	62.50			
			150.00		
	John Walter, Keeper of Lock 29		175.00		
	William Kuhn, Keeper of Lock 30		150.00		
	Dennis Harrison, Keeper of Lock 31		150.00		
	A. W. Jones, Keeper of Lock 32		175.00		
	William S. Elgin, Keeper of Lock 33, &c.		200.00		
	John Crowley, Keeper of Lock 34 &c.		175.00		
	John Kercheval, Keeper of Lock 35, &c.		250.00		
	John L. Jordan, Keeper of Lock 37		150.00		
	Edward Hays, Keeper of Lock 38, &c.		200.00		
	Joseph Gwynn, Keeper of Lock 39		150.00		
	Andrew McCoy, Keeper of Lock 40		150.00		
	John Buchanan, Dam 4		150.00		
	W. Watkins, ferry to the 5 th of May		51.26		
			2,976.26		
				4,026.26	
4 th	Third superintendency				
	John G. Stone, superintendent		800.00		
	Eli Stake, collector at Williamsport		300.00		
	Arthur Blackwell, collector at Hancock		300.00		
			600.00		
	A. K. Stake, Keeper of locks 41 & 42 to 1 st July	\$100.00			

L. Stanhope, since	100.00			
	200.00			
Isaac Dodd, Keeper of Lock 43	150.00			
J. Hollman, Keeper of Lock 44 (water power)				
C. Myers, Keeper of Locks 45 and 46	200.00			
Jacob Morter, Guard Lock 5	150.00			
Daniel Brewer, Keeper of Locks 47,48,49 & 50	300.00			
Upton Rowland, No. 51 and 52 to 1 st April	\$50.00			
J. Miller, since	150.00			
	200.00			
Sarah Conner, Keeper of Lock 53	150.00			
J. Doyle, Guard Lock 6	200.00			
		1,550.00		
			2.950.00	
				16,849.46
RECAPITULATION				
President, Directors, Standing Counsel, Clerks and Treasurer			\$4,948.20	
Superintendents			2,400.00	
Collectors			1,850.00	
Lock-keepers			7,651.26	
				16,849.46

L. J. BRENGLE, *Treasurer.*
 Office Chesapeake and Ohio Canal Company,
Frederick, January 10th, 1849

APPENDIX N

OFFICERS DECEMBER 31, 1850

Statement showing the Officers in the service of the Chesapeake & Ohio Canal Company, in the year ending 31st December, 1850, and the compensation to which they have been severally entitled for same period.¹⁴

1 st	James M. Coale, President		\$2,000.00	
2 nd	William A. Bradley, Director	\$68.00		
	Henry Daingerfield, Director	64.00		
	John Pickell, Director	116.00		
	Wm. Cost Johnson, Director	32.00		
	George Schley, Director	116.00		
	Samuel P. Smith	184.00		
			580.00	
3 rd	George Schley, Standing Counsel	200.00		
	W. S. Ringgold, Chief Clerk	1,400.00		
	W. S. Ringgold, Sec. to Stockholders	100.00		
	L. J. Brengle, Treasurer	1,400.00		
			3,100.00	
				5,680.00
4 th	First Superintendency			
	John Lambie, Superintendent		900.00	
	William H. Bryan, Collector at Georgetown	800.00		
	John Page, Inspector of Cargoes, Georgetown	300.00		
			1,100.00	
	Thomas Sampson, Lock B	50.00		
	John Moore, Locks 1 to 4	600.00		
	Frederick Metz, Lock 5 to 10 th March	\$55.56		
	Hy. L. Thomas, Lock 5 since	144.44		
		200.00		
	James Delzell, Lock 6	150.00		
	W. Duly, from 8 th March, Lock 7	121.77		
	Levi Barrett, Lock 8	150.00		
	John Lambie, to 15 th Dec., Locks 9 and 10	\$191.17		
	Charles Resenthal, since	8.83		
		200.00		
	W. H. Burgess, Lock 11	150.00		
	John T. Harrison, Locks 12, 13 and 14	250.00		
	John L. Trammel, Lock 15, one month	\$14.58		
	Richard Collins, from 8 th March to 15 th June	47.28		
	John Minnes, from 1 st Augusr	72.91		

¹⁴ Report to the Stockholders on the Completion of the Chesapeake & Ohio Canal to Cumberland (Frederick, 1851), pp. 139–140.

		134.77		
	Joseph Nevitt, Lock 16, one month	\$14.58		
	Lucy A. Metts, from 10 th March	140.98		
		155.56		
	Wm D. Houser, Locks 17 and 18	225.00		
	Daniel Collins, Locks 19 and 20	200.00		
	Samuel Fisher, Lock 21	150.00		
	John Fields, Lock 22	150.00		
	Edward L. Trail, Lock 23	100.00		
			2,987.10	
				4,987.10
5 th	Second superintendency, viz:			
	Wm S. Elgin, Superintendent		900.00	
	Lloyd C. Belt, collector at Point of Rocks	\$50.00		
	Wm S. Elgin, collector at Harpers Ferry	100.00		
			150.00	
	John Wells, Keeper of Lock 24	150.00		
	George W. Bozzell, Keeper of Lock 25	250.00		
	James Fitch, Keeper of Lock 26	150.00		
	Thomas Walter, Keeper of Lock 27	150.00		
	William Watkins, Keeper of Lock 28	150.00		
		850.00	1,050.00	10,667.10
	John Walter, Keeper of Lock 29	175.00		
	William Kuhn, Keeper of Lock 30	150.00		
	Dennis Harrison, Keeper of Lock 31	150.00		
	A. W. Jones, Keeper of Lock 32	175.00		
	Wm. S. Elgin, Keeper of Lock 33, &c.	200.00		
	John Crowley, Keeper of Lock 34 &c.	175.00		
	John Kercheval, Keeper of Lock 35, &c.	250.00		
	John L. Jordan, Keeper of Lock 37	150.00		
	Edward Hays, Keeper of Lock 38, &c.	200.00		
	Joseph Gwynn, Keeper of Lock 39	150.00		
	Andrew McCoy, Keeper of Lock 40	150.00		
	Thomas Wilson, Dam 4	150.00		
			2,925.00	
				3,975.10
6 th	Third superintendency, viz:			
	John Stone, Superintendent		800.00	
	Eli Stake, collector at Williamsport	300.00		
	Arthur Blackwell, collector at Hancock	300.00		
			600.00	
	L. Stanhope, Keeper of locks 41 & 42	200.00		
	Isaac Dodd, Keeper of Lock 43	150.00		
	J. Buchanan, Keeper of Lock 44	150.00		
	Jacob Morter, Guard Lock 5	150.00		
	C. Myers, Keeper of Locks 45 and 46	200.00		

	John S. Moore, Keeper of Locks 47 to 50		300.00		
	J. Miller, Keeper of Locks 51 and 52		200.00		
	Sarah Conner, Keeper of Lock 53		150.00		
	James Doyle, Guard Lock 6		150.00		
				1,650.00	
					3,050.00
7 th	Fourth Superintendency, viz:				
	<i>From Dam No. 6 to Cumberland</i>				
	Reuben Worthington, Collector at Cumberland			35.00	
	Overton G. Lowe, Lock No. 56	\$150.00	27.50		
	F. McAnary, Lock No. 57	150.00	25.00		
	John Beard, Lock No. 58	150.00	25.00		
	Henry Gay, Lock No. 59	150.00	37.50		
	Wm. Crawford, Lock No. 60	150.00	22.92		
	John Doyle, Lock No. 61	150.00	10.42		
	H. Kesekamp, Lock No. 62	150.00	25.00		
	H. Hunsicker, Lock 63 1/3, 64 2/3 and 66	250.00	24.30		
	Jacob Carts, Lock No. 67	150.00	25.00		
	Michael Minnaugh, Lock No. 68	150.00	20.83		
	Lloyd Lowe, Locks No. 69, 70 and 71	250.00	10.41		
	David Strong, Lock No. 72	150.00	75.00		
	James Moore, Locks 73 and 74	200.00	100.00		
	Archibald Young, Lock No. 75	150.00	83.33		
	A. J. Wilkins, Guard Lock No. 8	200.00	111.11		
				623.32	
	Temporary Lock-keepers			265.75	
					924.07
					\$18,616.17

Treasurer's Office Chesapeake and Ohio Canal Company,
Frederick, January 1st, 1851
 L. J. BRENGLE, Treasurer and Accountant

APPENDIX O

PRESIDENTS, DIRECTORS, AND CHIEF OFFICERS
FROM JUNE 1828 TO FEBRUARY 27, 1851

A list of the Presidents, Directors, and chief officers, of the Chesapeake & Ohio Canal Company, from its organization in June, 1828, to February 27th, 1851.¹⁵

Presidents	Period of Service		In Office		
	From	To	years	mo's	days
Charles Fenton Mercer	June 21, 1828	June 6, 1833	4	11	15
John H. Eaton	June 6, 1833	June 27, 1834	1	00	21
George C. Washington	June 27, 1834	June 3, 1839	4	11	7
Francis Thomas	June 3, 1839	April 2, 1841	1	10	00
Michael C. Sprigg	April 2, 1841	Dec. 3, 1842	1	8	00
Wm. Gibbs McNeill	Dec. 3, 1842	Aug. 17, 1843	0	8	14
James M. Coale	Aug. 17, 1843	Feb. 27, 1851	7	6	10
<i>Directors</i>					
Joseph Kent	June 21, 1828	June 11, 1831	2	11	21
Phineas Janney	June 21, 1828	June 2, 1840	11	11	12
Walter Smith	June 21, 1828	June 3, 1839	10	11	13
Peter Lenox	June 21, 1828	June 6, 1833	4	11	16
Andrew Stewart	June 21, 1828	June 6, 1833	4	11	16
Frederick May	June 21, 1828	June 11, 1831	2	11	21
William Price	June 11, 1831	June 27, 1834	3	00	16
John J. Abert	June 11, 1831	Dec. 21, 1839	8	6	10
William Gunton	June 6, 1833	June 3, 1839	5	11	28
Richard H. Henderson	June 6, 1833	June 3, 1839	5	11	28
George Bender	June 27, 1834	April 29, 1835	0	10	2
M. St. Clair Clarke	June 15, 1835	June 22, 1836	1	00	7
Thomas Carbery	June 22, 1836	July 16, 1838	2	00	24
John Hoye	July 16, 1838	June 3, 1839	0	10	18
Thomas Perry	June 3, 1839	Dec. 21, 1839	0	6	18
James Carroll	June 3, 1839	Dec. 21, 1839	0	6	18
Jacob G. Davies	June 3, 1839	June 2, 1840	1	00	00
Joseph White	June 3, 1839	June 2, 1840	1	00	00
Robert P. Dunlop	Dec. 21, 1839	April 2, 1841	1	3	12
Washington Duvall	Dec. 21, 1839	June 2, 1840	0	5	12
John W. Maury	Dec. 21, 1839	June 2, 1840	0	5	12
Frederick A. Schley	June 2, 1840	Declined	0	00	00
James Swan	June 2, 1840	April 2, 1841	0	10	00
John McPherson	June 2, 1840	April 2, 1841	0	10	00
William Lucas	June 2, 1840	April 2, 1841	0	10	00

¹⁵ Report to the Stockholders on the Completion of the Chesapeake and Ohio Canal to Cumberland (Frederick, 1851), pp. 149–150

William Tyler	June 2, 1840	April 2, 1841	0	10	00
Jacob Markell	July 22, 1840	April 2, 1841	0	9	11
Frisby Tilghman	April 2, 1841	June 7, 1847	6	2	5
John R. Dall	April 2, 1841	Aug. 5, 1842	1	4	3
John O. Wharton	April 2, 1841	June 24, 1847	6	2	22
Daniel Burkhardt	April 2, 1841	June 24, 1847	6	2	22
James M. Coale	April 2, 1841	Aug. 17, 1843	2	4	15
John P. Ingle	April 2, 1841	June 24, 1847	6	2	22
William Price	Aug. 5, 1842	June 24, 1847	4	10	19
William Darne	June 4, 1844	July 23, 1845	1	1	19
Robert W. Bowie	July 23, 1845	June 7, 1847	1	10	15
William A. Bradley	June 24, 1847				
Henry Daingerfield	June 24, 1847				
Wm. Cost Johnson	June 24, 1847				
John Pickell	June 24, 1847				
George Schley	June 24, 1847				
Samuel P. Smith	June 24, 1847				
<i>Chief Engineers</i>					
Benjamin Wright	June 23, 1828	Nov. 13, 1830	2	4	20
Charles B. Fisk	April 12, 1837	Sept. 26, 1840	3	5	14
Elwood Morris	Sept. 26, 1840	April 13, 1841	0	6	17
Charles B. Fisk	April 13, 1841				
<i>Clerks</i>					
Asa Rogers	June 28, 1828	Declined	0	00	00
John P. Ingle	July 5, 1828	July 9, 1840	12	00	4
Thomas Turner	July 9, 1840	Dec. 20, 1846	6	5	11
Walter S. Ringgold	Dec. 20, 1846				
<i>Treasurers</i>					
Clement Smith	July 5, 1828	July 7, 1834	6	00	2
Robert Barnard	July 18, 1834	Nov. 14, 1840	6	3	27
Samuel Tyler	Nov. 14, 1840	April 13, 1841	0	5	00
Robert Barnard	April 14, 1841	June 4, 1841	0	1	20
M. C. Cramer	June 4, 1841	Aug. 6, 1841	0	2	2
Ezra Houck	Aug. 6, 1841	Sep. 15, 1841	0	1	9
Joseph Schell	Sept. 16, 1841	Dec. 22, 1841	0	3	6
Robert Barnard	Dec. 22, 1841	Feb. 13, 1846	4	1	21
Philemon Chew	Feb. 13, 1846	April 14, 1846	0	2	1
Lawrence J. Brengle	April 15, 1846				

APPENDIX P

LIST OF CANAL POSITIONS, APRIL 1884¹⁶

<u>Division No. 1</u>		
Superintendent	J. J. Moore	\$125 per month
Collector	William Snowden	\$125 per month
Assistant Collector	William Jarboe	\$100 per month
Clerk	J. B. North	\$50 per month
Harbor Master	Frank Fishe	\$50 per month
Assistant Superintendent	Joseph Isaacs	\$100 per month
42 Lock-Keepers		\$40–\$65 per month
Superintendent, telephone		\$50 per month
Chief Engineer, Georgetown Incline		\$100 per month
Assistant Engineer, Georgetown Incline		\$72 per month
Helpers (4)		\$40–\$50 per month
Boss Carpenter (3)		\$65 per month
Carpenters (8)		\$1.75 per day
Smith		\$1.75–\$2 per day
Caulker		\$1.75 per day
Laborer		\$1.10 per day
Boss		\$55 per month
Laborers (23)		\$1.10 per day
Level Walker		\$40 per month
Mason		\$2.50 per day
Cook		\$20 per month
Boss of Dredge		\$70 per month
Engineer		\$2 per day
Dipper Tender		\$1.50 per day
Fireman (2)		\$1.50 per day
Deck Hand		\$1.15 per day
Laborers (16)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (8)		\$1.10 per day
Level Walkers (2)		\$1.10 per day
Cook		66-2/3 cents per day
Boss		\$55 per month
Laborers (7)		\$1.10 per day

¹⁶ Payrolls, April 1884–February 1885, C & O Co.

Cook		\$20 per month
Boss		\$55 per month
Laborers (13)		\$1.10 per day
Cook (2)		\$.66 2/3-\$1.10 per day
Boss		\$55 per month
Laborers (7)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (15)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (9)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (8)		\$1.10 per day
Cook		\$20 per month
Horse Hire		\$509
Total Payroll per month—\$6,222.06		
Total Collected for Room and Board—\$918.79		
<u>Division No. 2</u>		
Superintendent	Lewis G. Stanhope	\$125 per month
Collector	A. Willison	\$150-\$50 per month
Collector	J. Spielman	\$150-\$50 per month
Clerk	E. Edwards	\$100 per month
Gauger	John Ranahan	\$50 per month
Inspector	E. Null	\$40 per month
35 Lock-Keeper		\$40-\$65 per month
Telephone		\$50 per month
Steam Packet		\$25-\$30 per month
Assistant Engineer		\$38 per month
Boss Carpenter (3)		\$65 per month
Carpenters (9)		\$1.10-\$2 per day
Masons (3)		\$1.75-\$2.65 per day
Boss		\$55 per month

Laborers (6)		\$1.10 per day
Cook		\$20 per month
Laborers on Mud Machine		\$1.10 per day
Boss		\$55 per month
Laborers (9)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (7)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (5)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Level Walkers		\$1.10 per day
Laborers (5)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Level Walkers (2)		\$1.10 per day
Laborers (6)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (7)		\$1.10 per month
Cook		\$20 per month
Boss		\$55 per month
Level Walkers (2)		\$1.10 per day
Laborers (1)		\$1.10 per day
Cook		\$20 per month
Horses (19)		
Teams (2)		\$388.75
Total Payroll per month—\$5,713.15		
Total Collected for Room and Board—\$629.53		
BASIN WHARF (INCLUDED IN DIVISION NO. 2 PAYROLL)		
Clerk		\$100 per month
Boss		\$50 per month
Trimmer		\$50 per month
Watchman		\$50 per month

Hostler		\$35 per month
Carpenters (92)		\$1.50 per day
Laborers (3)		\$1.10 per day
Dumpers (5)		\$1.65 per day
Trimmers (7)		\$1.65 per day
Driver		\$1.50 per day
Total Payroll per month—\$373.30		

APPENDIX Q

LIST OF CANAL POSITIONS, FEBRUARY 1885¹⁷

Division No. 1		
Superintendent	J. P. Biser	\$60 per month
Collector	William Snowden	\$50 per month
Clerk	J. B. North	\$20 per month
Harbor Master	Frank Fisher	\$50 per month
40 Lock-Keepers		\$15–\$40 per month
1 Assistant Lock Keeper		\$15 per month
Captain—Packet		\$35 per month
Telephone		\$50 per month
Engineer, Georgetown Incline		\$47.50 per month
Assistant Engineer, Georgetown Incline		\$35 per month
Helpers		\$25 per month
Cook		\$20 per month
Boss Carpenter (3)		\$65 per month
Laborers (2)		\$1.10 per day
Carpenters (2)		\$1.50–\$1.75 per day
Boss, Dredge		\$22.50 per month
Engineer		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (6)		\$1.10 per day
Level Walker		\$40 per month
Cook		\$20 per month
Quarryman		\$25 per ½ month
Laborers (11)		\$1.10 per day
Cook		\$10 per month
Boss		\$55 per month
Laborers (23)		\$1.10 per day
Masons (2)		\$2.50 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (5)		\$1.10 per day
Cook		\$20 per month

¹⁷ Payroll, April 1884–February 1885, C & O Co.

Boss		\$55 per month
Laborers (6)		\$1.10 per day
Cook (2)		\$20 per month
Boss		\$55 per month
Laborers (12)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (6)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (6)		\$1.10 per day
Mason		\$2.50 per day
Cook		\$20 per month
Boss		\$55 per month
Laborer		\$1.10 per day
Cook		\$20 per month
Horse Hire		\$281.50
Total Payroll per month—\$2,672.92		
Total Collected for Room and Board—\$530.40		
<u>Division No. 2</u>		
Superintendent	Edward Mulvany	\$65 per month
Collector	A. Willison	\$62.50 per month
Assistant Collector	John L. Edwards	\$37.50 per month
34 Lock-Keeper		\$15–\$27.50 per month
Telephone		\$50 per month
Engineer, Pump		\$38 per month
Boss Carpenter (3)		\$65 per month
Carpenters (3)		\$1.10–\$1.75 per day
Blacksmith		\$1.90 per day
Mason		\$2.40 per day
Boss		\$55 per month
Laborers (4)		\$1.10 per day
Cook		\$20 per month

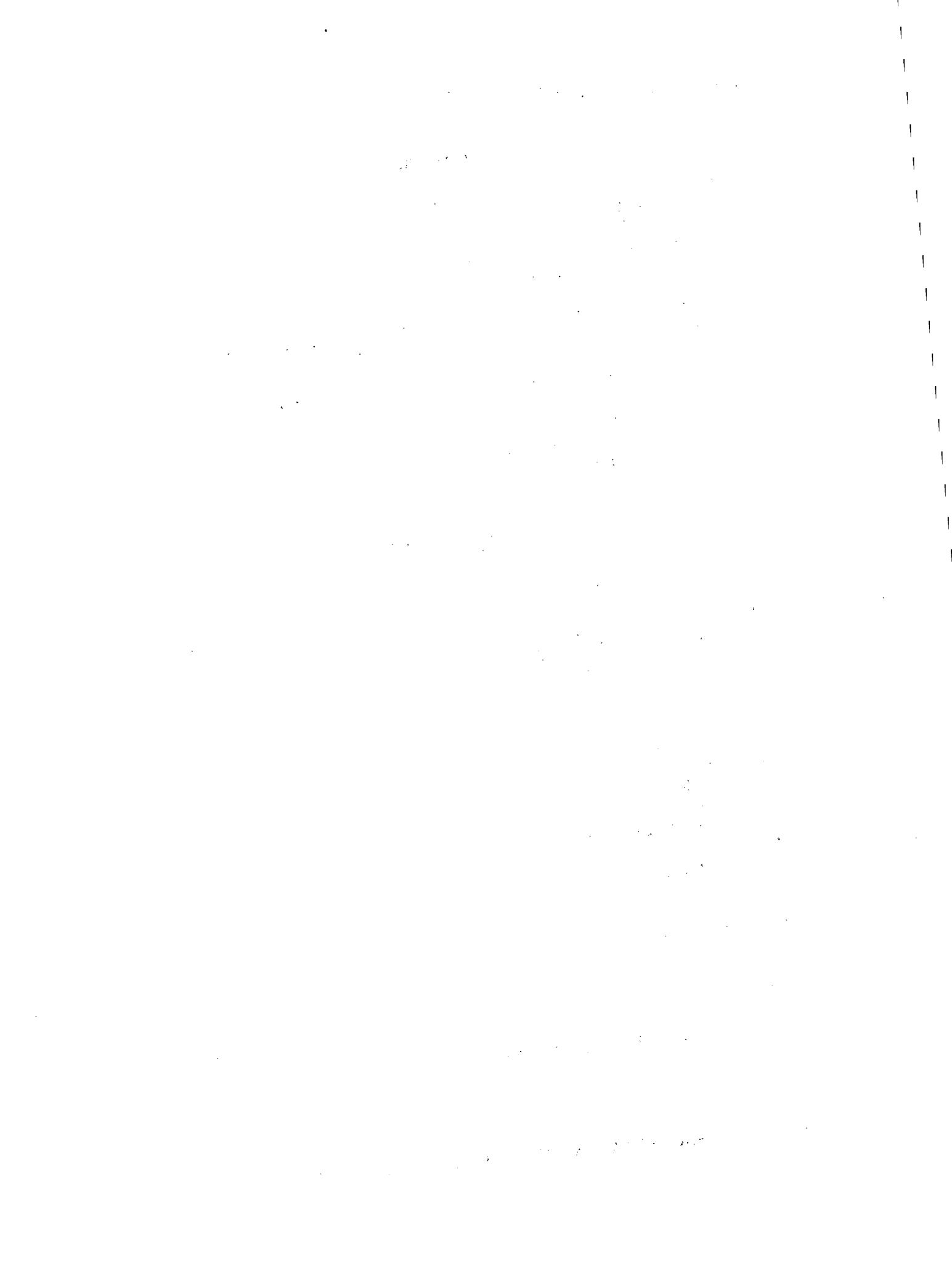
Boss		\$55 per month
Laborers (4)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (5)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (12)		\$1.10 per day
Cook		\$20 per month
Boss		\$55 per month
Laborers (9)		\$1.10 per day
Cook		\$20 per month
Horse Hire		\$237
Total Payroll per month—\$2,413.21		
Total Collected for Room and Board—\$236.80		
<u>BASIN WHARF (INCLUDED IN DIVISION NO. 2 PAYROLL)</u>		
Boss		\$25 per month
Watchman		\$50 per month
Hostler		\$30 per month

**HISTORIC RESOURCE STUDY
CHESAPEAKE & OHIO CANAL NHP**

10.

**THE ECONOMIC
IMPACT ON THE
POTOMAC VALLEY OF
THE C & O CANAL:
1828–1924**

BY HARLAN D. UNRAU
HISTORIAN, C&O CANAL RESTORATION TEAM, SENECA
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1976



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I. IMPACT OF THE WESTWARD PROGRESS OF THE CANAL AND RAILROAD

On July 4, 1828, groundbreaking ceremonies were held to commence the construction of two transportation lines that were designed to link the East and the West—the Chesapeake & Ohio Canal and the Baltimore & Ohio Railroad. During the next quarter century both works were extended gradually up the Potomac Valley to Cumberland and beyond. Prior to January 1832 both lines were confined to the area east of the Catoctin Mountains by the existence of injunctions prohibiting land acquisition above that point.¹ In October 1830, the waterway was opened between Dams Nos. 1 and 2, and in September 1831, navigation was commenced between the Georgetown tidelocks and Little Falls.² The railroad reached Frederick in December 1831 and Point of Rocks in April 1832.³ Thus at the time of the settlement of the legal controversy between the two rival companies in January 1832, both projects had nearly completed their works below the Catoctin Range, a distance of some 48 miles from Georgetown by canal and some 69 miles from Baltimore by rail. By the terms of a compromise approved on May 9, 1833, the joint construction of the two transportation lines through the narrow passes of the river between Point of Rocks and Harpers Ferry was undertaken. The latter town was reached by the canal in November 1833 and the railroad in December 1834.⁴

Above Harpers Ferry the canal and railroad followed separate paths up the Potomac Valley. The railroad abandoned the Maryland side of the river and pursued a more direct course through the rugged and sparsely settled terrain of Western Virginia, free of the competition with the canal for the right-of-way, to a point just below Cumberland. Only for brief intervals did it return to the Potomac Valley prior to recrossing the river into Maryland. The canal followed the winding river to Cumberland remaining entirely within the immediate narrow confines of the valley on the Maryland side of the stream. Hence the canal, much of which was in the flood plain of the river, followed a more difficult and circuitous route.⁵

Since work on the canal above Harpers Ferry was in progress even before the completion of the joint construction above Point of Rocks, the 22.2-mile section between Dams Nos. 3 and 4 was opened in April 1834; six months after the waterway reached the Ferry.⁶ By slackwater navigation in the pool formed by Dam No. 4, Williamsport could be reached, a total distance of about 100 miles from tidewater.⁷

In April 1835 the 22.3-mile section between Dams Nos. 4 and 5 was completed.⁸

Because of the financial and labor problems together with increasingly more difficult terrain to overcome, the waterway was not finished to Dam No. 6 near the mouth of the Cacapon River, some 135 miles above Georgetown, until April 1839.⁹ By the time of the suspension of work in 1842, a considerable amount of excavation had been accomplished on the remaining fifty

¹ *Second Annual Report* (1830), C & O Co., 9.

² *Proceedings of the President and Board of Directors*, B, 194, and C, 5. Also see Van Slyke to Mercer, Apr. 2, 1831, Ltrs. Recd., C & O Co. and *Niles' Register*. Vol. XL (Apr. 9, 1831), 91.

³ Edward Hungerford, *The Story of the Baltimore & Ohio Railroad, 1827-1927*, (2 Vol., New York, 1928), Vol. I, 116-117.

⁴ *Proceedings of Stockholders*, A, 170-174; *Proceedings of the President and Board of Directors*, C, 341-342 and D, 3; *Niles' Register*, Vol. XIV (Oct. 5, 1833), 84; *Ibid.* Vol. XLV (Nov. 23, 1833), 199; and Milton Reizenstein, *The Economic History of the Baltimore & Ohio Railroad, 1827-1857* (Baltimore, 1897), 29-32.

⁵ Walter S. Sanderlin, *A Study of the History of the Potomac Valley*, (Washington, 1950), 87.

⁶ *Sixth Annual Report* (1834) C & O Co., 4.

⁷ *Fredericksburg Arena*, Oct. 6, 1835, quoted in *Niles' Register*, Vol. XLIX (Oct. 24, 1835), 127.

⁸ *Niles' Register*, Vol. XLVIII (Apr. 11, 1835), 89.

⁹ *Ibid.* Vol. LVI (Apr. 27, 1839), 131-132.

miles to Cumberland, but the work was to idle until November 1847 while numerous attempts were made to secure finances for the continuation of the work.¹⁰

In the meantime, the Baltimore & Ohio had pushed its railroad rapidly westward, paying little heed to one of its original sponsors, the State of Maryland, or to the needs and desires of the citizens of Western Maryland. The route chosen by the Baltimore railroad promoters in their race for the Cumberland coal trade and the Ohio Valley did carry tracks close to the Potomac River on the Virginia side opposite Hancock, but this provided little consolation to the inhabitants on the northern side of the river. Hagerstown and Williamsport, two of the most important towns in Washington County were completely ignored, although the former was eventually connected with the main line by a spur track from Weverton in December 1867.¹¹

In this manner, the Baltimore & Ohio arrived at Cumberland in November 1842, eight years ahead of the canal, and continued westward.¹² The canal was formally opened as far as Cumberland on October 10, 1850, amid fanfare and enthusiastic celebrations.¹³

However, the Baltimore & Ohio continued to push its lines westward, reaching Piedmont in July 1851 and Fairmont in June 1852. On January 10, 1853, the railroad completed the connection of its eastern and western sections at Cumberland and opened its lines all the way to Wheeling on the Ohio River, some 379 miles from Baltimore. Thus, less than three years after the canal reached Cumberland, it was further outdistanced by its rival line for the lucrative east-west trade markets.¹⁴

¹⁰ *Ibid.*, Vol. LXIV (July 29, 1843), 342–343; *Ibid.*, Vol. LXV (Aug. 12, 1843), 372–373; and *Twentieth Annual Report* (1848), C & O Co., 3–8.

¹¹ Hungerford, *The Story of the Baltimore & Ohio Railroad*, Vol. I, 70–72.

¹² William H. Lowdermilk, *History of Cumberland* (Washington, 1878), 351–352.

¹³ Cumberland Civilian, reprinted in *Proceedings of the Stockholders*, D, 390–395.

¹⁴ Lowdermilk, *History of Cumberland*, 376, Reizenstein, *Economic History of the Baltimore & Ohio*, 85.

II. IMPACT OF CONSTRUCTION OF THE CANAL AND RAILROAD

The Potomac Valley reflected the influence of the westward progress of the canal and railroad at almost every stage of construction. The farmer and other property holders benefited in many ways. Those fortunate enough to own land in the paths chosen by the two companies profited immediately from the sale of their property to the internal improvements companies.

From the first year of construction, the canal company was forced to pay exorbitant sums for the purchase of its right-of-way. While some of the landholders, on the route over which the canal was to pass, readily granted the company the title required, many others obstructed the work and refused to surrender their property voluntarily, in the hope of realizing great profits from forced sales. In the latter instances, condemnation proceedings were resorted to. These increasingly became the rule as construction moved up the river and as the speculation fever of the landowners rose.¹⁵

Among those who resisted the condemnation efforts of the canal company were those who held out for the highest possible price and those who would not sell for any price. The former included those who resisted the verdict of the juries, called for new trials and generally tried to secure higher prices by delaying tactics, which raised their nuisance value.¹⁶

The second group usually had other motives in the background. Charles Carroll, for example, brushed aside all offers for the purchase of land on Dougheregan Manor, his 10,000-acre estate in Frederick County. He was one of the founders of the Baltimore & Ohio Railroad, which at that time was locked in a struggle with the canal company for the right-of-way in the Potomac Valley.¹⁷

After the legal controversy was settled in January 1832, the canal company continued to face large land prices as the waterway entered Washington County, near Harpers Ferry. The first land condemned was that of Gerard B. Wager, a bitter opponent of the canal company. The damages awarded were very high, and the verdict provided a discouraging precedent for the directors who had hoped for more favorable settlements in the county. The determination of the local landholders to exact full satisfaction was further strengthened by the award of the utmost damages obtainable in the condemnation of land owned by Casper Wever, an official of the railroad and enemy of the canal project. Even some of the friends of the canal participated in the onslaught that followed. The more impatient proprietors resorted to injunctions to enforce prompt payment of their awards.¹⁸

In 1835 and 1836 juries in both Washington and Allegany counties continued to exact full satisfaction for land purchased by the canal company between Dams No. 5 and 6. Although the company won a victory in one appeal to the courts and the juries were severely censured, the hoped-for relief proved illusory. Land costs averaged \$2,290 a mile, more than double the estimate of \$1,000 made in 1834, ranging all the way from 2½ to 25 times the estimated costs. In a letter to the board, Commissioner George Bender described the situation as follows:

I commenced my efforts to obtain there land with a strong hope of compromising and did in fact compromise with eight of the proprietors who has thus signed, and two others who had not before a simple jury was carried to the ground, viz. with Wade, Harvey, Brawles, Mrs. Jacques, Stottlemeyer, A. Snyder, Lespand, R. Summers, N. Summers and Michael Smith; but from these persons it had become necessary by the new line to acquire 191½

¹⁵ *Proceedings of the Stockholders*, A, 41–41, and Walter S. Sanderlin, *The Great National Project: A History of the Chesapeake & Ohio Canal* (Baltimore, 1946), 79.

¹⁶ *Proceedings of the Stockholders*, A, 42.

¹⁷ Carroll to Mercer, Feb. 26, 1829, Ltrs. Recd., C & O Co.

¹⁸ Sanderlin, *The Great National Project*, 91.

acres at the aggregate sum of \$7,372 instead of 108½ acres at the aggregate sum of \$5,575 as estimated by Mr. Cruger (in 1834). In other words, for the 41,664 feet length of canal through their estates, I had to pay \$705.70 per mile. These compromises, however it must be borne in mind, consisted in large proportion of land of little or no value for cultivation and when I attempted to compromise for the more valuable portions of the line, yet confined myself at all within the limits of Mr. Cruger's estimate, I found myself entirely baffled. In some case the owners were minors, or their titles were not perfect, or there were claims for loss of mill power and etc., so that it became necessary to resort to the linguistics of juries as prescribed by the charter of the company.

Bender then noted the results of the jury awards:

	1834 Estimate	Cost
Heir of Dan Smith	\$1,000	\$2,300
J. Charles, Jr.	100	2,500
Sam Prather	1,000	2,960
Prather Heirs	500	1,287
Tobias Johnson	1,150	10,600
Otto	225	1,775
Linn	400	1,575
Peter Miller (per agreement)	150	1,200
J. Chambers	625	2,350
Widow Bevans	575	1,000

The commissioner concluded his report by stating that:

So long as the value of the land taken is to be judged of by the neighbors and friends of the land proprietor brought together a jury against a company of strangers as they are taught to consider, so long will the expense attending the acquisitions be much greater than has been heretofore anticipated.¹⁹

Previous to this series of condemnations, some proprietors in Allegany County had been willing to compromise, if only to avoid paying the lawyers fees. The prices up to that time approximated the estimates of the engineers. Thereafter, the prospects for windfall profits were so promising that landowners were willing to pay legal cost to gain the larger damages.²⁰

Potomac Valley residents also benefited from the increase in the value of the property not required by the canal and railroad. For instance, property values in Cumberland increased from \$931,118 to \$2,124,400 in 1860.²¹

This effect extended far beyond the immediate neighborhood of the new transportation facilities and was perhaps the most widely bared benefit of their construction. The cause of the increase in land values was the advantage, which these commercial arteries brought of cheap and easy access to the principal markets for their products and the major sources of their necessities.²²

Another effect on the valley was the immigration of many persons seeking employment on the internal improvement projects. These people brought with them their families, their cus-

¹⁹ Bender to President and Directors, May 31, 1836, Ltrs. Recd., C & O Co.

²⁰ Price to Washington, Oct. 25, 1836, Ltrs. Recd., C & O Co.

²¹ Lowdermilk, *History of Cumberland*, 351, 388.

²² Sanderlin, *A Study of the History of the Potomac Valley*, 89.

toms and their beliefs; sometimes, quite alien to the valley. The Catholic Irish were particularly disturbing to the established local communities comprised primarily of Protestant German and Scotch Irish stock, more so than the relatively fewer Dutch, German, Welsh and English immigrants. The presence of large numbers of persons in crowded and filthy temporary quarters also brought health problems to the valley. Minor epidemics among the Irish during the "summer season" were not unusual in the valley, and there were two major scares in 1832 and 1833 over the spread of cholera from the workers to the local inhabitants along the waterway. In addition, the presence of so many rough and trouble unassimilated laborers in a limited area saved the question of the maintenance of order. Drunken brawls accompanying all-night drinking bouts disturbed the valley, and clashes between the Irish factions in the mid-1830s terrified the citizens in the neighboring towns. The later disputes between the workers and the canal company and between the various nationalities employed on the lines, which erupted into violence on several occasions and put the inhabitants of the area into the difficult positions of militia arbiters and innocent victims. The groundswell of racial bitterness produced by these antagonistic events laid the foundation for the early rise of political nativism in Western Maryland during the 1830s.²³

The inhabitants of the Potomac Valley were able to take an active part in the process of the construction. When agricultural workers were not pressing, many inhabitants took employment on the line of the worker. Because of the need for large numbers of workers and the relatively small pool of labor in the valley, the rate of wages remained at a high level throughout the construction firms and receive contract to build the various canal structures. The farmers found a ready market, relatively free of shipping costs and widespread competition, for their surplus food and drink. Lumber, the principal value of which previously had been as a local building product and as fuel, found a more profitable use in construction. Stone, which like lumber had heretofore been limited to local use, received a good price as ballast and building material, or, in the case of limestone, as a valuable ingredient in hydraulic cement.²⁴

The last important way in which the Potomac Valley was influenced by the construction of the canal was in financial affairs. The valley prospered directly from the existence of the sizeable payrolls of the transportation companies, most of which was spent in the immediate neighborhood. The alternating cycles of boom business circles in the valley rose and fell with the employment and fortunes of the internal improvement companies. When the canal was nearly completed from Georgetown to Seneca, the *National Intelligencer* reported on June 29, 1830:

The execution of this great National work has progressed with a rapidity as astonishing as it is unparalleled in the history of works of this description. A short time only has yet elapsed since the necessity existed of rousing public sentiment to proper appreciation of the importance of this great enterprise by essay after essay, and of diverting the national energy to its accomplishment by convention after convention. But now, only have the moral obstacles to its progress been removed, the root of prejudice eradicated, and the rock of error blown away, but physical obstructions, far more difficult than any one can appreciate who has not seen them, have been overcome, and, under the plastic hand of man, made subservient to the great interests of commercial intercourse.²⁵

²³ See Chapter VII of this study for more information on the canal's labor force and its effect on the Potomac Valley.

²⁴ *Proceedings of the President and Board of Directors*, A, 288; C, 357-361; Knapp, Ford and Chapman to President and Directors, Mar. 26, 1829, Ltrs. Recd., C & O Co. For more information on this subject also see Chapter VIII of this study.

²⁵ Washington, *National Intelligencer*, June 29, 1830.

On January 15, 1831, the Frederick *Town Herald* noted the enthusiasm with which Virginia and Maryland agricultural and lumber interests were using the first stretch of the waterway to be opened:

The operations on this great work still continue, we are informed, with great vigor. As late as the 18th of December, the weekly returns of effective laborers gave 2,205 men and 379 horses. . . Very recently forty-five boats passed through the locks of the 17th and 18th sections in one day, laden with more than 6,000 barrels of flour, part of which descended by the Shenandoah, from Port Republic, a point within 20 miles of Stanton, the geographical center of Virginia; and another from Williamsport, in Maryland, 100 miles above the District of Columbia; and wood, for fuel, has already been brought down the canal a distance of 16 miles, from above the great falls of Potomac.²⁶

Some five months later, on June 4, 1831, the same newspaper glowingly detailed the economic impact of the canal and railroad on the growth of business activity in Frederick:

From the returns . . . we learn that during the quarter ending on the 12th ult. One thousand and ninety-three barrels of flour have been inspected in this city. The increased inspection has been caused by the demand for the laborers engaged on the public works in this vicinity – and if our natural advantages for the establishment of manufactories, especially on the Monocacy, were improved, the markets for the products of our farmers would be greatly extended. As Mr. Jefferson said: "The manufactures should be seated alongside the agriculturalist."²⁷

In February 1835 when the canal company was attempting to lobby the Maryland legislature for additional pledges to its stock in an effort to keep construction of the waterway moving, *Niles' Register* reported on the beneficial effects that an affirmative decision would have on the trade of Cumberland and the commerce of the state it self as follows:

For then a very heavy business must need be transacted on the canal, the town (Cumberland) just named becoming a great place of deposit between the east and west, whether commodities are proceeding to or from Pittsburgh or Wheeling; and especially from the former when the Monongahela shall be opened for navigation, as it will be, sooner or later.²⁸

When work on the canal was suspended in early 1836 pending a further loan from the State of Maryland, the optimistic prospects for Cumberland changed to pessimism and depression:

The stoppage of the work on the Chesapeake & Ohio Canal has caused a very considerable panic in Cumberland. Two hours after the arrival of the news, the price of produce came down at least 10 percent. Business still continues to be dull; our principal streets presenting an unusual barrenness; the merchant is idle; and the mechanic slow in the transaction of his business; the speculator is cut to the quick, and those who engaged to pay high rents on account of the prospects of the canal, have been suddenly and seriously

²⁶ Frederick, *Town Herald*, Jan. 15, 1831.

²⁷ Frederick, *Town Herald*, June 4, 1831.

²⁸ *Niles' Register*, Vol. XLVII (Feb. 21, 1835), 428.

disappointed. Indeed, the citizens of the town generally, and the farmers for many miles around, have great cause to regret this temporary suspension.²⁹

After the canal was completed to Dam No. 6 in the spring of 1839, the *National Intelligencer* noted the prospects for the improvement in canal trade and the need for completing the waterway to Cumberland:

We may now expect a great increase to the trade of the canal, because the portion in use connects with the national road at Hancock.

Owing to the unusual low stage of the water at this season of the year, the river navigation between Cumberland and the point to which the canal is finished is very dangerous; so much so, that out of seven coal boats which left Cumberland lately, during a small rise in the river, but three reached the canal, the others being lost. This fact shows how important the completion of the canal is to the people of Maryland, as well as the advantages which the people of this district (District cities) may reasonably anticipate, upon the accomplishment of that event.³⁰

When the Maryland legislature failed to authorize another appropriation for the completion of the canal to Cumberland before it adjourned in the spring of 1842 *Niles' Register* observed:

The unfortunate disagreement between the two houses of the legislature of Maryland, in relation to amendments to the bill for completing this stupendous work to the coal and iron regions of Allegany County, which alone can bring the work into profitable operation, will have the inevitable effect of suspending all operations, for the year, and leave the unfinished work to certain dilapidation, with the contracts subject to expensive litigation, and the state saddled with the interest accruing upon seven million of dollars invested in the undertaking. . . So disastrous are likely to be the consequences of the upper counties of the state, that large meetings are convened and calls are making the Governor to convene an extra session of the legislature with the view of adopting a measure that would not only divert the catastrophe, but bring to our aid the vast resources that are now almost within our grasp.³¹

During the five-year suspension of work on the canal from 1842 to 1847, there were several unsuccessful attempts to negotiate new loans for the recommencement of construction. When one such attempt was first reported in July 1843, *Niles' Register* commented that "This is glorious news for Maryland."³²

Later, in December 1843, after it was reported that an offer had been made to complete the canal for \$1,300,000, *Niles' Register* noted that the waterway when finished, "will place Maryland in the very focus of the most prosperous and productive trade."³³

In late 1845 when work was resumed briefly under a new contract, *Niles' Register* informed its readers:

The subcontractors with apparatus and corps of laborers are now strewed all along the line from Dam No. 6 to Cumberland. Day is dawning again after a long gloomy night.

²⁹ *Ibid*, Vol. XLIX (Feb. 20, 1836), 426.

³⁰ *Ibid*, Vol. LVI (Apr. 27, 1839), 131–132.

³¹ *Ibid*, Vol. LXII (Mar. 26, 1842), 52.

³² *Ibid*, Vol. LXIV (July 15, 1843), 320.

³³ *Ibid*, Vol. LXV (Dec. 30, 1843), 276–277.

The Williamsport *Banner* of the 1st inst. says the trade of that part of the Canal, which is completed, never before was so brisk. Immense quantities of flour; grain and other kinds of produce have been collected in our town, and are now ready for transportation to the District Cities. Thus, we understand too, is the case at other points along the line of the Canal. Within the last week or two, an unusually large number of boats have passed down the Canal.³⁴

After lengthy negotiations, construction on the last portion of the canal was finally resumed in November 1847 under a contract with Messrs. Hunter, Harris and Thompson. Again business circles in the Potomac Valley and the surrounding region expressed their renewed faith in the future economic growth of the area, for example:

Immense beds of the best coal exist at Cumberland; and Washington, Georgetown and Alexandria will doubtless be highly benefited by the commerce in this article, as soon as they can ascend by this Canal to the primitive and exhaustless formations. In seventeen of the counties of Virginia and Maryland situated on the borders or vicinity of this canal, with a population of 232,784 persons, there have been raised in one year 14,425,134 bushels of grain, being nearly 62 bushels to each inhabitant. With about one seventy-third part of the population of the Union, according to the census of 1840, these seventeen counties produce one forty-second part of the grain raised in the United States.

The sufficiency or scarcity of money in the valley was also related in part to the level of activity on the transportation projects and the financial policies of their works both the railroad and the canal resorted to the issuance of their own paper money at various times. The Chesapeake & Ohio first issued scrip, amounting to some \$90,000 in \$5, \$10, and \$20 notes payable in one year at four percent interest in April 1834 to enable work to continue until the anticipated returns from the sale of Maryland bonds could be realized. The first experience was uneventful because the proceeds of the bond sale were more than sufficient to redeem the notes by September 1835. In fact, it was very popular throughout the valley, for it prevented a work stoppage.³⁶

In the currency famine following the panic of 1837, both the railroad and canal had occasion to resume the issuance of paper money. The anticipation of the proceeds from the sale of additional Maryland bonds again provided the necessary excuse for the action. Accordingly, the canal company on June 7 determined to issue scrip amounting to \$50,000 in notes of denominations between 50 cents and \$5, the size of the notes being accounted for by the fact that there were almost no notes in the valley of less than \$5 value.³⁷

Once more the decision was at first a popular one in the valley. Joseph Shriver, the president of the Cumberland Bank of Allegany County informed canal officials on June 29, 1837, that his institution approved of the company's plan to put small notes into circulation and requested several hundred dollars' worth as there was an urgent call for them.³⁸

Two weeks alter on July 12, Shriver again requested \$200 to \$300 of company notes as those "already recently have been paid out and the demand for them continues as great as ever." Unless the company notes were placed in the hands of the Cumberland citizenry as quickly as

³⁴ *Ibid*, Vol. LXIX (Nov. 8, 1845), 147.

³⁵ *Ibid*, Vol. LXIV (Nov. 1, 1848), 286.

³⁶ *Proceedings of the President and Board of Directors*, D, 408, and *Niles' Register*, Vol. XLVI (Apr. 26, 1834), 133, and Vol. XLVII (May 3, 1834), 149.

³⁷ *Proceedings of the President and Board of Directors*, E, 268–269.

³⁸ Shriver to Ingle, June 29, 1837, Ltrs. Recd., C & O Co.

possible, other notes would begin flowing into the town "from all quarters to supply the amount of change" and reduce the demand for the canal notes.³⁹

Even in Baltimore public sentiment was in favor of the canal company decision to issue scrip. According to the President George C. Washington on August 13, 1837, an article in the *Baltimore Gazette* on the previous day, compliments the directors for their "spirit and foresight on assuring that we have nearly a million in circulation, when in fact we have not \$50,000." The demand for corporate notes was so great in the north that it was estimated that arrangements could be made "for the reception in New York alone for a quarter of a million of our small notes, without obligation to pay interest." Similar results were predicted for canal scrip in both Philadelphia and Baltimore. Already corporate issues of small notes had supplanted entirely the market for individual notes in the latter city.⁴⁰

The popularity of the corporate scrip and the failure of the expected sales of the State bonds to materialize, forced the canal and railroad enterprises to enlarge their issues. From the limited issue of notes of small denominations only, which had been a temporary expedient to fill a gap in the local monetary picture, the two companies proceeded to large-scale emissions of notes. In August and September 1837 the canal company authorized the printing of \$260,000 worth of \$5, \$10 and \$20 notes, payable at six months after date and bearing an interest rate of six percent.⁴¹

At the same time the unfavorable condition of the market, which was indicated by the lack of sales, made the security behind the notes the subject of doubt. Discounting of notes became frequent; even the Baltimore & Ohio's notes, which had been issued to pay employees' salary, were discounted 20 percent in Cumberland and 25 percent in Baltimore as late as 1842, on the eve of its completion to the former town.⁴²

Indirectly, the Potomac Valley was affected by the impact of the heavy cost of the railroad and canal projects on the finances and credit of the State and local banks. Taxes, property values, the condition of local currency and the state of business health itself were all dependent in part on the State and upon the larger banks in Baltimore and the eastern part of the state.⁴³

³⁹ *Ibid.*, July 12, 1837, Ltrs. Recd., C & O Co.

⁴⁰ Washington to Ingle, Aug. 13, 1837, Ltrs. Recd., C & O Co.

⁴¹ *Proceedings of the President and Board of Directors*, E, 298–299, 317, 426. Ultimately, the following notes were issued: 6,000 sheets of two \$5 notes, one \$10 note and one \$20 note = \$240,000 and 500 sheets of two \$5 notes, one \$10 note, and one \$20 note = \$20,000. The form of the notes was as follows: \$20 note—the \$20 note of the Bank of Montgomery County with the exception of the margin on the ends for which was substituted the ends of the Urganna Banking Company \$20 note; \$10 note—the \$1 note of the Philadelphia Loan Company with the end margin of the \$10 note of the Bank of the State of Arkansas; and \$5 note—the \$10 note of the Bank of Rochester with the end margin of the \$50 note of the Columbia Bank and Bridge Company. Ingle to Underwood, Bald Co., Aug. 1837, Ltrs. Recd., C & O Co.

⁴² Lowdermilk, *History of Cumberland*, 350. Ironically, shinplasters circulated by the Good Intent Stage Company were still redeemed at face value.

⁴³ Sanderlin, *A Study of the History of the Potomac Valley*, 93. For instance, state stocks fell to 64 percent of par value in March 1844 after the state legislature refused to pass a bill providing for the completion of the canal to Cumberland. When the bill had been under consideration and had a chance of passage, the state stocks had sold at 82 percent of par value in Baltimore. Coale to Ward, Mar. 14, 1844, Ltrs. Recd., C & O Co.

III. IMPACT OF ENLARGED PROJECTS THROUGH THE ADDITION OF BRANCH LINES AND CONNECTING TRADE LINKS

The canal was not "complete" when it reached Cumberland. Unlike the Baltimore & Ohio however, the canal was unable to extend its waterway over the mountains to the Ohio River. Nevertheless much work was done during the late 1820s and early 1830s in surveying the route, securing land titles, and making detailed plans for the proposed middle and western sections of the canal between Cumberland and Pittsburgh.⁴⁴

The project was dropped and lay dormant for some forty years before it was revived in the early 1870s during the most prosperous years of the canal trade. At that time, it was estimated that the canal could be extended to the Ohio River at a cost of between \$24,000,000 and \$28,000,000.⁴⁵

With the decline of the coal trade, the bitter competition of the railroad and the deterioration of the waterway itself during the following decade, the project was not seriously considered again.⁴⁶

In addition to the ambitious planning for the extension of the main line of the Chesapeake & Ohio to Pittsburgh, several branches were considered by the directors and by other interested promoters. Among these were a number of feeders in the Potomac Valley and three extensions from the eastern terminus of the waterway, all of which would have the effect of binding the valley more closely together and of expanding the benefits on the main line.

At various times almost every major tributary of the Potomac River was considered as the site of a possible feeder. One projected branch up the Monocacy River to Frederick was frequently discussed in 1829. In February of that year the Canal directors agreed to build a feeder to supply water from the Monocacy River to a canal to be built by the newly incorporated Frederick County Canal Company connecting the town of Frederick with the Chesapeake & Ohio.⁴⁷

At about the same time, the board recommended that a connection between the Monocacy and the Susquehanna might be effected, thus providing an inland waterway to New York.⁴⁸

Dr. John Martineau and Frederick authorized a survey of the proposed Monocacy improvement during the summer and fall of 1829 and estimated the cost of the 24-mile waterway at \$296,389.⁴⁹

The citizens of Frederick soon lost interest in the waterway however, and turned again to the railroad. The canal directors, who had looked upon the branch primarily as a feeder for that part of their own canal above Dam No. 2, were greatly disappointed by this lack of cooperation. Seeking ways of utilizing its waterway above the Seneca Dam while the railroad injunction was still in effect above Point of Rocks, the Canal board again considered the Monocacy River as a

⁴⁴ "Reports and Letters from the Engineers Employed in the Revised Location of the Western Section of the Chesapeake & Ohio Canal," in *First Annual Report* (1829) C & O Co., 104 ff. and William Archer, "Communication from Wm. Archer, esq., to the Stockholders of the Chesapeake & Ohio Canal, On the Subject of the Location of the tunnel through the Allegany Mountain", (Washington, 1835), 1-7.

⁴⁵ Records Concerning Proposed Extension of the Canal, ca. 1874, C & O Co., U. S. Congress, House, *Letter of the Secretary of War on the Extension of the Chesapeake & Ohio Canal*, Exec. Doc. 20, 43rd Congress, 1st Session, April 14, 1874, 5-9; and U. S., Congress, House, *Letter of the Secretary of War, Transmitting the Report of Engineer Merrill on the Chesapeake & Ohio Extension*, Exec. Doc. 137, 44th Congress, 1st Session, Mar. 2, 1876, 2-3.

⁴⁶ The subject of the western extension of the canal was speculatively revived during World War Two and in the late 1920s and early 1930s. The cost of the project was estimated at \$219,000,000 in 1930 and \$242,000,000 in 1934. *Washington Star*, Jul. 17, 1927, Oct. 25, 1929, May 4, 1930 and Sep. 30, 1934.

⁴⁷ *Proceedings of the President and Board of Directors*, A, 164.

⁴⁸ *Proceedings of the Stockholders*, A, 53.

⁴⁹ *Frederick Examiner*, quoted in *Niles' Register*, Vol. XXXVII (July 4, 1829), 302, and *Niles' Register*, Vol. XXXVIII (Mar. 20, 1830), 69.

feeder in 1831, along with the Little Monocacy, Tuscarora Creek, Broad Run, Abraham's Branch and other streams below that town.⁵⁰

The board of directors also showed some interest in the development of the Shenandoah River trade and detailed plans were drawn up to make that river navigable in February 1832.⁵¹ However, the strained financial condition of the company made it impossible to undertake any major work on that river. As its resources neared exhaustion, the improvement of any tributaries of the Potomac by the canal company in the immediate future was impracticable. In 1831, the company waived its rights to those branches in order to encourage the organization of state corporations to make the branches navigable and serve as connectors to the canal. Company officials were especially eager to see such enterprises improve the Monocacy and Antietam and Conococheague Creeks.⁵²

Later in November 1838 the canal directors appealed in vain to the Virginia legislature for aid to connect the Chesapeake & Ohio with the South Branch, Cacapon and Shenandoah Rivers and make improvements on them for navigation purposes.⁵³

In March 1839, the board gave its assent to acts of the Maryland and Virginia General Assemblies incorporating the Union Company and the Union Potomac Company to construct a canal or slackwater navigation on the North Branch of the Potomac from the proposed terminus of the Chesapeake & Ohio at Cumberland to the north of the Savage River, but the project was never undertaken because of the extended delay of the main line in reaching that town.⁵⁴

There were three projects for independent canals to tap the trade of the main stem at its eastern terminus, two of which were ultimately carried to completion and put into operation. The Maryland ("Cross-Cut") Canal, which would have connected Baltimore with the main stem, was under consideration until 1839 and again briefly in the 1870s, but it was never built because of its prohibitive cost, the rapid westward construction of the railroad and the various competing political rivalries in Maryland and between Baltimore and the District Cities.⁵⁵

However, the Washington City and the Alexandria Canals were finished, and the latter became an important outlet for the trade of the Chesapeake & Ohio.

The Washington City Canal, which had been built between 1810–1815, was a 2½-mile waterway connecting the Potomac and Anacostia Rivers. It extended from the mouth of Tiber Creek to the foot of present New Jersey Avenue at the Eastern Branch, with the second line following the course of James Creek from a junction with the first route near the present intersection of New Jersey Avenue and E Street, S.E., to the Anacostia River east of Greenleaf Point (present day grounds of the War College).⁵⁶

The organization of the Chesapeake & Ohio Canal Company revived interest in the already deteriorating city canal as a means by which the trade of the former could be brought to Washington. The city and the Chesapeake & Ohio reached a compromise in September 1828 by which the latter agreed to extend its waterway from Rock Creek Basin to a basin, which the city undertook to construct at the mouth of Tiber Creek.⁵⁷ The extension of the Chesapeake & Ohio was completed in 1837 at a cost of \$310,000, of which Congress appropriated \$150,000, and its

⁵⁰ *Proceedings of the Stockholders*, A, 132 and *Proceedings of the President and Board of Directors*, B, 384–385; C, 35.

⁵¹ Stewart to Mercer, Feb. 10, 1832, Ltrs. Recd., C & O Co.

⁵² *Proceedings of the Stockholders*, A, 190–192.

⁵³ *Proceedings of the President and Board of Directors*, E, 521.

⁵⁴ *Ibid.*, F, 31–33.

⁵⁵ Sanderlin, *The Great National Project*, 171–175.

⁵⁶ Wilhelmus Bryan, *A History of the National Capital* (2 Vol., New York, 1914–1916), Vol. I, 499–501; and Sanderlin, *The Great National Project*, 175–177.

⁵⁷ *Proceedings of the Stockholders*, A, 23–24.

operation as a toll-free public highway was placed under the control of a commission appointed by the city council.⁵⁸

Although the Washington City Canal remained one of the possible outlets for the trade of the Potomac Valley until the 1880s, it was seldom used for a variety of reasons. Among those were the following:

1. The tide consistently filled the channel, requiring continual dredging operations.
2. In the early years, the trade on the main canal and the demand of the city markets were not great enough to provide much business for it.
3. By the time the Chesapeake & Ohio was completed to Cumberland, the canal boats had become so large that navigation under the low Georgetown bridges was virtually impossible; hence, trade with both Georgetown and Washington declined as boats crossed the Potomac Aqueduct to reach tidewater at Alexandria.
4. In 1871, four years after Georgetown bridges were raised, Congress took over the direction of city affairs, and the city canal was neglected as Congress was not interested in the commercial development of the city as much as it was in its role as the National Capital.⁵⁹

The most important of the proposed extensions of the Chesapeake & Ohio was the canal to Alexandria built between 1831 and 1843 at a cost of \$1,250,000. To obtain a reasonable proportion of the anticipated increased commerce from the Chesapeake & Ohio, local merchants took the lead in the formulation of the Alexandria Canal Company to construct a tidewater canal along the south bank of the Potomac from an aqueduct across the river above Georgetown. The major undertaking in the project was the Potomac Aqueduct, a structure over 1,500 feet long, 30 feet wide and 5 feet deep. Eight stone piers rising from the bed of the river and two stone abutments on the north and south banks carried the wooden trunk, in excess of 1,000 feet, across the river and some 30 feet above tide. The company overcame the hostility of Georgetown, whose merchants saw the project as a threat to their monopoly of the valley trade, and surmounted the failure of the Chesapeake & Ohio to build the northern abutment of the aqueduct as was required of it by an agreement.⁶⁰

By 1850 the Alexandria branch had become the primary outlet of the Chesapeake & Ohio to the river, for the Georgetown bridges were too low for many of the canal boats and Rock Creek Basin was often greatly filled in and generally out of repair. From 1867, when the Georgetown bridges were raised, to 1887, when Congress purchased the Potomac Aqueduct and converted it to a bridge, Alexandria had to share the coal trade on the canal, which gradually declined until it became negligible.⁶¹

Aside from the independent canal connection at its eastern terminus, the Chesapeake & Ohio encouraged and facilitated other connecting trade links with its main stem. The company constructed three river locks to provide direct boat communication between the Virginia side of the river and the canal. The three locations were: Edwards Ferry, built in 1835–38, to tap the rich agricultural commerce of Loudoun County; near Sandy Hook just below Harpers Ferry, built in 1832–33, to connect with the Shenandoah River trade; and across from Shepherdstown, built in

⁵⁸ *Ibid.*, A, 224–225; and Bryan, *A History of the National Capital* Vol. II, 110.

⁵⁹ Sanderlin, *The Great National Project*, 178–179; Bryan, *A History of the National Capital* Vol. II, 265–266, 576, 626; and *Proceedings of the Stockholders*, E, 185.

⁶⁰ *Niles' Register*, Vol. XL (July 9, 1831), 328; *Ibid.*, Vol. XLVIII (June 1835), 241; *Washington National Intelligencer*, Dec. 1843; Sanderlin, *The Great National Project*, 179–182; and Washington D.C., Georgetown, and Alexandria Collection, Holland Loan, Library of Congress.

⁶¹ *Proceeding of the President and Board of Directors*, N, 362, and Sanderlin, *The great National Project*, 182.

1833–35, to procure the business of that town and the surrounding hinterland of Jefferson County. The guard locks at each of the canal dams across the Potomac permitted boats to enter and exit the canal and cross the river in the slackwater pools behind the dams. In addition, the canal company encouraged the operation of ferries or constructed bridges across its waterway at points where established trade routes were already located between the Maryland and Virginia sides of the river.⁶²

During the 1870s the Chesapeake & Ohio Canal Company sought to promote the continued expansion of trade in both agricultural produce and coal by facilitating the construction of the Cumberland Valley Railroad and the Western Maryland Railroad where those lines touched upon the canal's rights. This policy had the effect of both expanding the economic benefits of the canal and knitting the valley more closely together. Completed in 1874, the Cumberland Valley Railroad was a short line extending from Harrisburg to Winchester, crossing the canal just below Williamsport at Powell's Bens. At that point the canal directors agreed to allow the construction of wharf facilities for loading and unloading of coal, lumber, and agricultural produce.⁶³ The Western Maryland Railroad, completed in December 1873, provided a connection between the canal at Big Pool just above Williamsport and Baltimore. It was anticipated that the waterway would carry most of the railroad's coal business from Cumberland to the western terminus at Big Pool.⁶⁴

The canal company also encouraged the construction of railroad spur lines between the Cumberland Basin and the coal fields west of the city. By January 1877 there were four such existing rail lines as follows:

1. The Baltimore & Ohio passed through the town westward up the North Branch to Piedmont where it connected with the southern portion of the Cumberland coal region. As the decision of the Maryland Court of Appeals in 1832 had sustained the claim of the canal company to the prior location of its waterway in the valley, the railroad needed the approval of the canal board for its proposed route through the town. Accordingly, on February 14, 1851, the two companies signed a contract whereby the route of the railroad was approved and tracks were constructed to the canal basin between Hay's and Shriver's Mills. Since any railroad from the coal fields in the Frostburg, Georges Creek and Savage River districts would have to cross the Baltimore & Ohio to reach the canal, the canal company required it to permit its tracks to be crossed by other railroads seeking to reach the canal basin, when so requested by the canal directors.⁶⁵
2. The Cumberland and Piedmont Railroad was the result of a consolidation of various railways running from Cumberland to all the coal mines west of that town. Terminating at Piedmont, where it connected with the Baltimore & Ohio, this railroad carried all the coal mined in Western Maryland that passed to the canal, the Baltimore & Ohio, and the Pennsylvania Railroad.⁶⁶
3. The Cumberland and Pennsylvania Railroad, which had taken over the lines of the Mount Savage Railway, ran from the coal basin in Cumberland through the narrows of Wills Creek to the Mount Savage Coal mines. From there it extended over the mountains

⁶² *Proceedings of the President and Board of Directors*, C, 242–243. Also see Chapter IX of this study for more information on this subject.

⁶³ *Proceedings of the President and Board of Directors*, L, 469–470, and *Forty-Fifth Annual Report* (1873), C & O Co., 16–17.

⁶⁴ Hood to Gorman, Mar. 11, 1876, Ltrs. Recd., C & O Co. and *Forty-Sixth Annual Report* (1876), 18. The anticipated coal trade was never fully realized as the Western Maryland Railroad failed to obtain adequate terminal facilities in Baltimore.

⁶⁵ Hamill, Brannon and Farmands to President and Directors, Jan. 9, 1877, Ltrs. Recd., C & O Co., and Sanderlin, *The Great National Project*, 245.

⁶⁶ Hamill, Brannon and Farmands to President and Directors, Jan. 9, 1877, Ltrs. Recd., C & O Co.

where it connected with Georges Creek Railroad, thus offering a continuous line from Cumberland to Piedmont.⁶⁷

4. The Pittsburgh and Connellsburg Railroad, which had at one time been controlled by the Baltimore & Ohio, extended from the canal basin through the narrows of Will's Creek up to the Pennsylvania State Line and on to Pittsburgh.⁶⁸

During the period 1878 to 1880, the canal company attempted to secure an independent connection with the coal fields in order to reduce the cost of transportation for the coal companies and to free the waterway of its dependence as a coal carrier on the aforementioned railroads. It sought to facilitate the construction of no less than four independent railroad companies with the canal basin at Cumberland by invoking the agreement of 1851 to compel the Baltimore & Ohio to permit the roads to cross its tracks. Among these were the following:

1. The Georges Creek and Cumberland Railroad, organized and incorporated in 1879, built its line from the center of the Georges Creek coal field to Cumberland, a distance of 24 miles. There it connected with the canal basin and the Baltimore & Ohio.⁶⁹
2. Two railroad companies, the Bloomington and Fairfax and the Potomac and Piedmont, agreed in 1880 to build short feeder lines to the Baltimore & Ohio Railroad on the promise of special rates from the canal for coal shipped over it.⁷⁰
3. In 1880 the canal board invoked the agreement of 1851 at the request of the Pennsylvania Railroad to compel the Baltimore & Ohio to permit the former road to cross its tracks in order to enter Cumberland and connect with the basin.⁷¹

In 1886 and 1887 an independent connection with the West Virginia coal fields was realized with the completion of the Piedmont and Cumberland Railway, a subsidiary of the West Virginia Central and Pittsburgh Railroad Company. This railroad built its line down the Potomac Valley to the south of the Baltimore & Ohio, and therefore was not balked in its efforts to reach the canal by the refusal of that company to permit a crossing of its tracks. Approaching Cumberland basin from the west, the Piedmont and Cumberland quickly gained the consent of the waterway to a connection with the basin wharf.⁷²

Like the canal company, the Baltimore & Ohio constructed branch railroads that played a role in knitting the Potomac Valley more closely together as well as expanding the economic benefits of its main line. Among these branches were the following:

1. On December 1, 1867, the Washington County Railroad was opened for the 24-mile distance from Weverton on the main stem to Hagerstown
2. In 1868 the Metropolitan Branch was opened, making a direct connection between Washington, D. C., and Point of Rocks and thus shortening by some 54 miles. The previous circuitous rail route between the national capital and the west.
3. The 28-mile Winchester and Potomac Railroad between Winchester and Harpers Ferry, which had been opened for service in 1836, was taken over by the Baltimore & Ohio in

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*

⁶⁹ *Fifty-Second Annual Report* (1880), C & O Co., 12, and John Thomas Scharf, *A History of Western Maryland* (2 Vol. Philadelphia, 1882), Vol. II, 1430–1431.

⁷⁰ *Fifty-Second Annual Report* (1880), C & O Co., 13, and *Proceedings of the President and the Board of Directors*, N, 99–100, 112.

⁷¹ *Proceedings of the President and the Board of Directors*, N, 114–115.

⁷² *Fifty-Ninth Annual Report* (1887), C & O Co., 11, and *Proceedings of the President and Board of Directors*, N, 345–346.

1848. Between 1866 and 1870 it was extended some 20 miles to the Shenandoah Valley town of Strasburg where it made connection with the Strasburg and Harrisonburg Branch of the Virginia Midland.
4. In 1871 a branch railroad was built from Cumberland to Pittsburgh, which for years had been regarded as the exclusive province of the Pennsylvania Railroad.⁷³

As has already been mentioned, the effect of the branch lines to the main stem of the Chesapeake & Ohio Canal and the Baltimore & Ohio Railroad was to knit the Potomac Valley more closely together and to expand the economic benefits of the principal lines. The operation of this new transportation network completed the revolution in the life of the valley begun by the Ohio Company in 1749, the Potomac Company in 1785, and the National Road in 1806 and advanced during the period of the construction of the canal and the railroad. The essentially isolated, agricultural pattern of life was modified to accommodate an expanded commercial, mining and limited industrial development.⁷⁴

The principal influence of the canal and railroad transportation systems, in their operation, was as a basis for all trade and communication in the valley. Even the local road networks in some areas were keyed to the two main lines. For example, it was reported in the *Washington Star* on June 10, 1889, that the closing of the canal by the recent titanic flood had taken away in Montgomery County,

the means of transportation from a belt of country averaging 10 miles on the side of the canal, and which at present has no outlet except by wagon over inferior roads to stations on the Metropolitan Branch of the Baltimore & Ohio Railroad . . . while the uncertainty of future transportation has caused almost panic among the landowners. . . Another indirect loss, in case the canal is not restored or a railroad built on its bed, is the change in roads, which will be necessary. The canal is the objective point of many roads in this county. These will have to be changed or closed, and new roads laid out to enable people to get to market.⁷⁵

There was a marked shift of trade from the historic north-south route following the natural contour of the valley to an east-west direction based upon the two new transportation systems. This was accompanied by a decline in the prominence of numerous ferries across the Potomac as well as other remnants of local provincial trade arteries. In their early operating years both companies were interested both in local and through trade, but the railroad gradually concentrated on the latter and thus out distanced its rival work as a carrier.⁷⁶

⁷³ Hungerford, *The Story of the Baltimore & Ohio*, Vol. I, 70-72, 113-119.

⁷⁴ Sanderlin, *A Study of the History of the Potomac Valley*, 94.

⁷⁵ *Washington Star*, June 10, 1889.

⁷⁶ Sanderlin, *A Study of the History of the Potomac Valley*, 94-95

IV. IMPACT OF THE OPERATION OF CANAL AND RAILROAD

A. NEW INHABITANTS

The operation of the canal and the railroad had a significant impact on the socio-economic development of the Potomac Valley. A new type of inhabitant was brought to the valley, even as the construction period had drawn a new group of people to the hitherto largely isolated, agricultural valley dotted with small Protestant Scotch-Irish and German communities. The canaller—including lock keepers, maintenance crews, and boatmen—who generally lived in close proximity to the canal were the most pronounced of the new type during the operating period. Their life was a hard one, irregular and unpredictable, and their independent habits fitted their lifestyle. Highly individualistic, yet definitely feeling themselves to be a group apart from the mainstream of valley society, the canallers usually shunned the towns, because it cost too much to buy provisions and they felt out of place even while wintering along the line of the waterway, they had their own settlements on the fringes of the towns or often quite far from them. As a rule, their coarse behavior, disrespect for authority, and lack of civilized ways made them the cause of unease among the farmers and townsfolk. Yet the purchasing power they brought into the valley economy and the services they performed made them an indispensable part of its existence, however grudgingly this fact might be conceded.⁷⁷

The impact of the canallers on the valley economy was amply demonstrated in an article in the Williamsport *Pilot* on February 8, 1873:

The Chesapeake & Ohio Canal employs 400 boats constantly during the boating season. These boats require 2,000 head of mules, and give employment to 2,000 persons directly and 2,000 indirectly. The mules consume at least 25,000 barrels of corn, 3,840 bushels of oats, and 500 tons of hay. This provender, which is mainly purchased along the line of canal, costs in the aggregate \$60,000. The wages of employees, other than hands on repairs, amounts to the sum of \$156,800. These figures are rough estimates, based on the lowest prices for everything, and will be found in the main, lower than the actual figures would make them. And from them some idea may be formed of the real worth of this work to the people of Maryland.⁷⁸

B. ECONOMICAL TRANSPORTATION AND AGRICULTURAL DIVERSIFICATION

To the basic agricultural existence of the Potomac Valley, the waterway and railroad provided the stimulus of a cheap and easier access to the markets of the District Cities and Baltimore. An indication of the immediate impact on the agriculture of the valley appeared in *Niles' Register* on April 9, 1831 noting that upon the completion of the canal between Little Falls and Dam No. 2 the shipping costs to Georgetown for a barrel of flour had fallen from \$1 to 30 to 50 cents and eventually to 7 cents, including tolls. During the last ten days of March some 30,000 barrels of flour "with much other merchandise" had descended the waterway, providing the canal company with nearly \$3,000 in toll revenues.⁷⁹

When the canal reached Harpers Ferry in November 1833, it had a similar effect on the cost of transporting flour and wheat. Formerly, it had cost between 85 cents and \$1 to send a bar-

⁷⁷ Sanderlin, *A Study of the History of the Potomac Valley*, 95.

⁷⁸ Williamsport *Pilot*, Feb. 8, 1873, in Arthur Pue Gorman Collection, University of North Carolina Library, Chapel Hill, NC.

⁷⁹ *Niles' Register*, Vol. XL (April 9, 1831), 91, 95, and Lee to Mercer, Jan. 13, 1831, Ltrs. Recd., C & O Co.

rel of flour to Georgetown by wagon, but the opening of the waterway resulted in a reduction of this cost to 40 cents. In a similar manner, the canal allowed a reduction of 12 cents per bushel for the transportation of wheat from the Ferry to the District Cities.⁸⁰

The three principal agricultural products carried on the canal were flour, corn and wheat. The flour trade via the waterway started at 151,966 barrels in 1842 and exceeded 200,000 barrels each year from 1848 to 1853, reaching a peak of nearly 280,000 barrels in 1850. The rapid increase in the flour trade resulted from the westward progress of the canal into the rich grain-growing areas of the upper Potomac Valley and from the fact that the farmers and millers of Franklin, Fulton, Bedford and Somerset Counties of southwestern Pennsylvania began using the waterway in 1884 as their principal means of transport since it afforded "them the cheapest and most convenient mode of transportation to market."⁸¹

A severe drought in the valley during the mid-1850s reduced the canal's flour trade by some 50 percent.⁸²

During the late 1850s and the Civil War years, the railroad began virtually to monopolize the valley flour trade, and the canal never carried more than 24,000 barrels of flour after 1867.⁸³

Flour shipments on the Baltimore & Ohio increased from 146,936 barrels in 1832, to 294,385 in 1842, and to 774,410 barrels in 1862,⁸⁴

Large quantities of wheat and corn were also shipped on the canal. The former averaged about 225,000 bushels a year between 1842 and 1849, 275,000 bushels a year between 1850 and 1850, and nearly 415,000 a year between 1866 and 1878, reaching a peak of 605,880 bushels in 1869. The latter averaged about 145,000 bushels a year between 1842 and 1849, 170,000 bushels a year between 1850 and 1860, and nearly 100,000 bushels a year between 1866 and 1878, reaching a peak of 431,760 bushels in 1867.⁸⁵

The stimulus that the canal provided to increase agricultural production in the Potomac Valley by offering economical transportation of produce to market was underscored by Victor Cushwa, a leading Williamsport merchant and canal shipper, in two newspaper articles in the late 1880s. On December 30, 1887, he observed in the Hagerstown *Mail* that:

When our canal was flourishing, until recent years, our farmers within its reach frequently got more for their grain, hay, potatoes, etc. than they commanded in Baltimore or other eastern markets, thereby appreciating real-estate, private and public wealth.⁸⁶

After the canal had been wrecked by the titanic flood of 1889, Cushwa noted in the Baltimore *Sun* of December 26, 1889, that:

The failure on the part of the management to repair and operate the canal has brought upon our people the most disastrous results. Loss of business, labor and property amounting to hundreds of thousands of dollars, and the depreciation still going on, are matters that go down deep into the recesses of the heart, and most seriously affect the prosperity of the people of Western Maryland, to so many of whom the canal was the only market

⁸⁰ Millard Kessler Bushong, *Historic Jefferson County* (Boyce, 1972), 122.

⁸¹ *Proceedings of the Stockholders*, C, 461, and Sanderlin, *The Great National Project*, 306–307.

⁸² *Twenty-Seventh Annual Report* (1855), C & O Co., 13–14.

⁸³ Enbrey to Somnto Dellinger, Apr. 26, 1862, Ltrs. Recd., C & O Co., and Sanderlin, *The Great National Project*, 30 – 33.

⁸⁴ Reizenstein, *The Economic History of the Baltimore & Ohio Railroad*, 74–75.

⁸⁵ Sanderlin, *The Great National Project*, 306–307, and Sanderlin, *A Study of the History of the Potomac Valley*, 96. Shipments of grain on the railroad increased from 14,120 bushels in 1832 to nearly 200,000 bushels in 1852. Reizenstein, *The Economic History of the Baltimore & Ohio Railroad*, 75.

⁸⁶ Hagerstown *Mail*, Dec. 30, 1887, in Spates Papers.

and sole artery of trade. Our own fertile county of Washington, noted for its fine farms and thrifty farmers, is skirted by the canal a distance of 77 miles out of the 185 miles, the canal's entire length. The farmers of our sister counties in Pennsylvania (Franklin and Fulton), notwithstanding that many of them were favored with shipping facilities by nearby railroads, found better markets on the line of the canal, and hauled to it from miles inland the products of the farm, returning with coal, plaster, lumber, etc., benefited by the exchange. We would here answer a question often asked: "How can the canal create a better market than the railroads?" Simply because the canal is a consumer of farm produce as well as carrier of it. The boatmen are liberal buyers of every product of the farm...⁸⁷

The canal played a role in stimulating the diversification of agricultural production in the Potomac Valley aside from merely providing a transportation route for the marketing of farm produce. One such example occurred in 1848 and 1849 when the canal board reduced the charges on fertilizers, in cooperation with the Virginia Society for the Advancement of Agriculture, in order to help increase the productivity of the soil. This policy was of particular importance to Montgomery County, where the once fertile land had been worn out by successive tobacco crops. Thus, the county, earlier known for its large tobacco plantations began to face a serious decline in its agricultural production by the late 1830s and early 1840s and significant numbers of people emigrated to the West and the South during that period. In 1845, the Society of Friends, in conjunction with the efforts of the Virginia Society for the Advancement of Agriculture, introduced Chincha Island Peruvian Guano in the country. The new fertilizer soon came into widespread use, the worn out lands were restored, and new crops of rye and grasses were grown. After the Civil War, it was estimated that the county farmers spent \$15 million per year on fertilizer as the county quickly became one of the richest agricultural centers in the State, producing from 18 to 50 bushels of wheat and 30 to 60 bushels of corn per acre and providing enough produce for the operation of 30 mills.⁸⁸

C. SALE OF WATER POWER

In addition to the stimulus to agricultural production, the canal and railroad promoted milling and manufacturing in an attempt to develop other sources of trade. The canal board saw a twofold advantage in the sale of surplus water from the canal to mills and manufactories along its banks: The financial return from the sale of the water and the added business, which industrial establishments would bring. The continued financial straits of the company forced the canal directors to give increasing attention only to the first advantage. On May 26, 1835, the *National Intelligencer* urged the company officials to give the surplus water away in return for the benefits of increased trade from the factories:

The Chesapeake & Ohio Canal Company can furnish as much water power in the District of Columbia, as will propel every machine now in operation in the state of Rhode Island, but which must lie dormant for years, if the price at which the water is now held shall not be materially reduced. Would not the canal company be infinitely more benefited by giving the water without charge to such establishments, at the termination of the canal, and derive their income from the increased business on it, than by holding it at an ordinary

⁸⁷ Baltimore Sun, Dec. 26, 1889, in Spates Papers.

⁸⁸ *Proceedings of the President and Board of Directors*, H, 214, 239; Thomas Hulings Stockton Boyd, *The History of Montgomery County, Maryland* (Baltimore, 1879), 107–110; and Scharf, *A History of Western Maryland*, Vol. I, 672.

price for revenue, prevent its occupation? Capital and manufacturing skill can only be brought here by liberal encouragement.⁸⁹

The desperate finances of the company, however, prevented such ideas from receiving serious consideration. The early promoters of the canal also thought that small manufacturing villages would spring up all along the line, at every lock at which waste and flume power would be available. This idea persisted among the company officials as late as 1874 despite the obvious failure of earlier expectations and reports from other canal authorities telling them to expect sales only near towns.⁹⁰

In the beginning, the canal company did not possess the right to dispose of its surplus water by sale to manufactures as its charter granted the undertaking rights to only that water which was essential for purposes of navigation.⁹¹ During the winter of 1828-29, the board petitioned for the necessary grant of authority from the parties to the charter, but only gradually did the directors overcome the opposition of the valley inhabitants, some of whom attempted to construe the old Potomac Company charter and its modification in the Chesapeake & Ohio charter as giving them the sole right to use the surplus water of the river in proceedings before the Supreme Court.⁹² Virginia, whose citizens had the least to lose, gave the necessary authority in February 1829.⁹³ Under pressure from the local proprietors on the Maryland side of the river who viewed the company request as an infringement of their own rights, the state legislators in Annapolis continued to refuse to grant the petition. After a second unsuccessful attempt during the winter of 1829-30, the stockholders were informed that despite another rejection;

It is not possible that the people of Maryland will long hazard a transfer to the shores of Virginia, of every manufacturing village, to which a judicious use of the surplus water of the Potomac might give rise; or that both states will permit a source of common improvement so fruitful of good, to remain unprofitable to either bank of the Potomac.⁹⁴

Finally on March 22, 1833, the Maryland General Assembly assented in return for the consent of the Chesapeake & Ohio to the extension of the railroad between Point of Rocks and Harpers Ferry.⁹⁵

After a lengthy delay, Congress gave its approval for the sale of water power in the District of Columbia in March 1837.⁹⁶

The only restriction on the power received under their acts was the stipulation of the Maryland laws that no water could be sold within the state for the manufacture of grain—a prohibition, designed to exclude competition with the Baltimore millers, that would hinder full realization of the program to encourage industrial development until its repeal in the early 1870s.⁹⁷

⁸⁹ *Washington National Intelligencer*, May 26, 1835.

⁹⁰ *Proceedings of the Stockholders*, A, 151; Allen to Starbach, Jan. 1, 1835. Ltrs. Recd., C & O Co.; and *Forty-Sixth Annual Report* (1874), C & O Co., 19.

⁹¹ Washington to Stewart, Jan. 20, 1836, Ltrs. Sent, C & O Co.

⁹² *Proceedings of the Stockholders*, A, 31, 44-45.

⁹³ *Act of the Virginia Assembly*, Feb. 27, 1829, and *Proceedings of the Stockholders*, A, 213. Pennsylvania had given its approval for the sale of surplus water in its act of incorporation in Feb. 1828

⁹⁴ *Proceedings of the Stockholders*, A, 151.

⁹⁵ *Ibid.*, A, 287, and *Laws made and Passed by the General Assembly of the State of Maryland* (Annapolis, 1832), Ch. 291

⁹⁶ *Congressional Globe*, Vol. IV, 110 and Vol. V, 114 & 217.

⁹⁷ *Forty-Sixth Annual Report* (1874), 19. In 1835 the Canal Co. sold rights to water power at Williamsport and Weverton, since both were within the state of Maryland, the Canal Co. did not have to await the consent of Congress.

During the struggle to acquire the legal authority to sell surplus canal water, the company also faced difficulty in establishing a clean title to the surplus water from Dam No. 1, the most valuable source of potential water power on the line. The claims of John K. Smith under the Potomac Company, which had first been raised in 1816, had been inherited by Colonel Amos Binney, a Boston capitalist. After the Colonel's death, his son Amos, a zoologist and paleontologist who took over the family's real estate and business ventures, took his claim into court after failing to come to an understanding with the canal directors over his claim to 300 acres of land at Little Falls encompassing all of the water power at that location. After a series of cases and appeals, the canal company won most of its points and compromised the few remaining ones in an out-of-court settlement in March 1836. Thus it was ready to take full advantage of its rights when Congress consented to the sale of surplus water the following year.⁹⁸

In preparation for exercising its new authority, the company appointed a committee on Water Power, consisting of President George C. Washington and Directors Phineas Janney, Walter Smith and Thomas Carberry.⁹⁹

The committee studied carefully the procedures on other canal and water-works where water was sold to manufactories, particularly the development at Paterson, New Jersey, Lowell and Fall River, Massachusetts and Richmond, Virginia.¹⁰⁰

The committee modeled its own rules after the review of those works and provided a gradual scale of increasing rents and for the location and control of water gauges. The grants were to be made for 20 years at an annual rate of \$2 per inch for the succeeding ten years. The leases could be renewed indefinitely for 30-year periods provided application was made within 20 days of expiration and a bonus of \$2.50 per inch was paid for the first renewal and \$3 per inch for each subsequent renewal. After the renewal of the lease, the annual rental rate would be \$3.¹⁰¹

On May 10, 1837, the canal board voted to advertise that water power and sites for manufacturing concerns were for sale in the District of Columbia.¹⁰² The national economic downturn in the aftermath of the Panic of 1837 retarded the development of manufactories along the line of the canal for several years, but by 1839–40 several leases for water power in Georgetown had been negotiated. During March 1839 the company finally adopted a standard form of agreement, which was thereafter followed in executing water leases.¹⁰³ According to available evidence, the first permanent lease of water from the canal for manufacturing purposes in Georgetown was made to George Bomford retroactive to January 1, 1839. The company granted him 400 square inches of water annually for use at his brick flour mill.¹⁰⁴

While water power rights were granted over the next fifty years at various places along the canal, including Weverton, Williamsport and Hancock, the most important development was at Georgetown. Here the greatest opportunity was available for the establishment of industries because of (1) the nearness to markets, labor supply and capital, (2) the location of Dam No. 1 at

⁹⁸ *Proceedings of the Stockholders*, A, 423–431; *Dictionary of American Biography*, Vol. I, 279–280; *Amos Binney vs. Chesapeake & Ohio Canal Company* in Chancery Court, Sep. 1829, Ltrs. Recd., C & O Co.; *Chesapeake & Ohio Canal Company vs. Binney & Cranch*, C. C. 68; and *Binney vs. Chesapeake & Ohio Canal Company*, 8 *peter*, 201.

⁹⁹ *Proceedings of the President and Board of Directors*, B, 216–217.

¹⁰⁰ *Form for Water Power Leases*, Aug. 1832, and Allen to Starbuck, Jan. 1, 1835, Ltrs. Recd., C & O Co., *Proceedings of the President and Board of Directors*, C, 35; E, 255.

¹⁰¹ *Conditions for Letting Water Power in the District of Columbia*, Mar. 23, 1837, Ltrs. Recd., C & O Co. and *Proceedings of the President and Board of Directors*, I, 159.

¹⁰² *Proceedings of the Stockholders*, B, 113, and *Proceedings of the President and Board of Directors*, E, 255. Pending the granting of full authority to the canal company to sell surplus water, the company had made several temporary agreements prior to 1837 for the sale of waste water in the Georgetown vicinity. Bomford's flour mill had begun to use water from the canal as early as 1835. At about the same time two agreements were made with Leckie and Nourse. In 1836 Mason's foundry commenced the use of canal water. *Ibid*, E. 253–255; F. 116.

¹⁰³ *Proceedings of the President and Board of Directors*, F, 31, 34.

¹⁰⁴ *Ibid*, F, 63–64.

Little Falls, (3) the large dimensions of the feeder and the Georgetown Level, (4) absence of restrictions on the use of the water, and (5) the fact that the town was a long-established port city and trade center and the site of various warehousing, merchandising and manufacturing concerns.¹⁰⁵

Millers, founders and textile manufactures soon became the chief users of water power in Georgetown.¹⁰⁶

D. COAL TRADE

The Cumberland coal fields, lying west of the city of Cumberland in a basin (known as Frostburg or George's Creek Barge) some five miles and twenty-five miles long between the Great Savage Mountain on the northwest and Dan's Mountain on the southeast, provided the greatest opportunity for the canal and railroad to promote economic diversification of the valley. Both lines were actually aware of the commercial promise of the mining areas and for more than half a century vigorously exploited the trade. In 1842, the year in which the Baltimore & Ohio reached Cumberland, only 1,708 tons of coal was transported over its line. The quantity of Cumberland coal carried by the railroad had grown to 192,806 tons by 1850, the year the canal reached that town. In that year, during which the canal managed to ship 4,042 tons of coal, the Cumberland coal mining operations were conducted by the following companies: Maryland Mining, Washington Coal, New York Mining, Allegany Mining, Frostburg Coal, Mount Savage Iron, George's Creek Coal and Iron, Border Mining, Parker Mining, Cumberland Coal and Iron, Wither's Mining and Aston Mining.¹⁰⁷ By the late 1870s the Cumberland coal fields comprised 44,132 acres of land. The aggregate depth of the coal formation was 1,100 feet and there were three principal veins: the Big Vein, measuring fourteen feet; the Four-Foot Vein; and the Six-Foot Vein. Fifteen mining companies were conducting operations in the fields: Borden Mining, Consolidation Coal, Blaem Aveon Coal, Hampshire and Baltimore, George's Creek Coal and Iron, New Central Coal, Maryland Coal, American Coal, Atlantic and G. C. Coal, Piedmont Coal and Iron, Swanton Mining, Potomac Coal, Maryland Union Coal, Davis' Brothers Virginia Mines and Union Mining.¹⁰⁸

All told, the total coal trade of the canal and railroad between 1842 and 1877 was nearly 32,000,000 tons. During that 36-year period, the canal carried 10,683,240 tons and the railroad 20,739,908 tons, the former reaching its peak in 1875 when it shipped 904,898 tons and the latter achieving its peak in 1873 when it transported 1,780,710 tons. In 1872 the Pennsylvania Railroad Company made an independent connection to the coal fields, and from that year until 1877 it shipped 667,729 tons. During 1873, the peak year of shipments from Cumberland mines, 2,674,101 tons of coal was transported by the three lines: the Baltimore & Ohio, 1,780,710 tons; the Chesapeake & Ohio, 778,802 tons; and the Pennsylvania Railroad, 114,589 tons. It is fair to conclude that from the 1850s to the 1880s the prosperity of the Baltimore & Ohio and the Chesapeake & Ohio depended to a large extent upon the coal trade from this region since it accounted

¹⁰⁵ Rogers W. Young, *The Chesapeake & Ohio Canal and the Antebellum Commerce of Old Georgetown*, National Park Service, Manuscript, 1940, 1–6.

¹⁰⁶ *Ibid.* 58–93, 149–176. In Appendix I of his study, Rogers listed the details of the "Water Leases for Mills on the Chesapeake & Ohio Canal in the Limits of Georgetown, D.C., 1839–1900" and the "Water Power Leases for Mills on the Canal between Georgetown and the Little Falls of the Potomac, 1840–1900." Copies of Young's lists may be seen in Appendix A and B of this chapter.

¹⁰⁷ *Report to the Stockholders on the completion of the Chesapeake & Ohio Canal Company to Cumberland* (Frederick, 1851), 126–127.

¹⁰⁸ Scharf, *A History of Western Maryland*, Vol. II, 1434–1441, and C. J. Orrick, *The Mineral Resources and Manufacturing Facilities of the City of Cumberland, MD* (Cumberland, 1975), 8–11.

for between 45 and 55 percent of the annual total tonnage transportation of the railroad and between 85 and 95 percent of the total tonnage of the waterway.¹⁰⁹

At the same time, the coal trade had a significant economic impact on the general prosperity of the valley. Such a point was made by Victor Cushwa on December 30, 1887, when he described the beneficial results of the coal trade on the standard-of-living in Washington County:

The direct revenue of canals or other public or private works . . . may not be enormous or even medium, but the indirect revenue is sometimes almost beyond computation when the great reduction in coal [price] alone is considered, thereby cheapening merchandise of all kinds in our county, the benefits of which independent transportation is the chief factor, the indirect benefits are almost incalculable. People are too apt to look only at the direct interest of public as also private enterprise. Too eager to keep in constant sight the almighty dollar and its direct profit, losing sight of the indirect and general good.¹¹⁰

E. GROWTH OF RELATED INDUSTRIES

The operation of the two transportation lines, especially of the canal, provided many related activities, which supported countless families in the Potomac Valley. Shipbuilding and repair became quite a profitable occupation. At the peak of the canal trade in the early 1870s, there were eight principal firms involved in the construction and maintenance of boats:

- Doener and Bender (Cumberland)
- Weld and Sheridan (Cumberland)
- William Young (Cumberland)
- Frederick Mentens (Cumberland)
- Benjamin Mitchell (Hancock)
- Consolidation Coal Co. (Cumberland)
- R. and M. Coulehan (Cumberland)
- Isaac Gruber (Cumberland)¹¹¹

In addition, there were at least seven dry docks built along the waterway for repair of boats:

- Lock No. 10—Ca. 1875
- Lock No. 14—Ca. 1864
- Edwards Ferry Basin—Ca. 1872
- Lock No. 30—Ca. 1855
- Lock No. 35—Ca. 1900
- Lock No. 44—Ca. 1862
- Lock No. 45—Ca. 1854¹¹²

Shipping lines also became an important source of profit as a result of the canal trade. By the late 1850s packets of the New York and Washington Steam Ship line were putting in weekly calls at the Georgetown wharves.¹¹³ More important was the development of coastwise and foreign trade, chiefly in coal [that] had been found to be particularly suited for New England textile mills,

¹⁰⁹ *Fiftieth Annual Report* (1878), C & O Co., 26–27 and *Fiftieth Annual Report* (1876), B & O Co., 36–37.

¹¹⁰ *Hagerstown Mail*, Dec. 30, 1887, in Spates Papers.

¹¹¹ See Chapter XI of this study for more information on this subject.

¹¹² See Chapter XI of this study for more information on this subject.

¹¹³ Mary Mitchell, *Divided Town* (Banre, 1968), 3.

steamship bunkering and iron smelting. Hence, much of the capital invested in the Maryland coal region before the Civil War was supplied by eastern or English businessmen, such as Evastus Corning, William H. Aspinwall, August Belmont, Edward Cunard and the Borden family of Fall River, Massachusetts, with special manufacturing or transportation interests, particularly in the Northeastern United States.¹¹⁴ During the late 1850s several shipping lines were formed to transport the coal from the canal wharves at Georgetown and Alexandria down the Potomac River, through the Chesapeake Bay, and up the Atlantic Coast to New York, Boston and other New England seaports. After a slow-down in the amount of coal shipped on these lines during the Civil War, the coastwise trade from the District Cities reemerged with new vigor in 1867 and remained heavy for nearly a decade. In the late 1870s a decline in the production of Cumberland coal and stiff competition from the Baltimore & Ohio drew off much of the coastwise coal trade from the District Cities.¹¹⁵

To a lesser extent, Cumberland coal descending the canal to Georgetown and Alexandria was shipped to foreign markets. From the late 1850s to the mid-1870s shipping lines transported coal to the British West Indies and ports on the northern coast of South America where there were English naval and commercial interests.¹¹⁶

In the 1840s and 1850s flour became a principal element of the coastline and foreign trade originating at Georgetown. That product, some of which passed down the canal from the upper Potomac Valley and much of which was produced in the Georgetown flour mills using canal water power, was shipped via coasting vessels to the populous cities of New York and Boston and to a lesser extent via steamship line to foreign ports. The coastwise and foreign shipment of flour from Georgetown was short-lived, however, as the Baltimore & Ohio Railroad acquired between one-half and two-thirds of the descending canal trade during the Civil War. Thereafter, the port of Baltimore became the central focus of the coastwise and foreign shipment of flour from the Potomac Valley and the flour produced at Georgetown was used primarily to meet the local needs of the District Cities.¹¹⁷ Many individuals made a comfortable living from the operation of grocery and feed stores along the waterway, supplying the boatmen with their necessary provisions for themselves, their families and their mules. Available evidence indicates that a conspicuous exception to this trend was the flour milling operations of Abraham Herr after 1862. When his large industrial holdings on Virginias Island at Harpers Ferry were destroyed during the fighting in 1861 and 1862, Herr moved to Georgetown and purchased the Columbia Flouring mill on the south line of the canal. He left the mill in the day-to-day superintendence of his head miller, Welch, and moved to Baltimore, where he initiated his own enterprise as a commission merchant miller on Smith's Wharf. From there he exported flour milled in Georgetown to markets in the West Indies and Brazil. At that time the Latin American markets wanted a high grade flour made from wheat with a relatively low moisture and high gluten content, such as would stand passage by sea through the tropics. The wheat from the upper Potomac Valley which descended the canal met such a description, and Herr, who was equipped to produce high grade flour and had an office in a port-city where flour constituted 70 percent of the exports to Brazil and over 50 percent of the shipments to other South American countries, continued to prosper. After the peace at Appomattox, Welch bought the Columbia Mill from Herr, who in turn bought the old cotton factory built along the canal in 1844. He converted this mill, which had been closed since 1861, into an-

¹¹⁴ Katherine A. Harvey, *The Civil War and the Maryland Coal Trade*, "Maryland Historical Magazine", Vol. LXIII (Dec., 1967), 361-362.

¹¹⁵ Young, *Antebellum Commerce of Old Georgetown*, 167-168, 176.

¹¹⁶ Washington, *National Intelligencer*, Apr. 21, 1862, and *Forty-Fifth Annual Report* (1873) C & O Co., 16.

¹¹⁷ Young, *Antebellum Commerce of Old Georgetown*, 176; Embrey and Son to Dellinger, April 26, 1862, Ltrs. Recd., C & O Co.; Reizenstein, *An Economic History of the Baltimore & Ohio*, 82-83 and Sanderlin, *The Great National Project*, 217-218.

other large and prosperous flour mill, which ultimately became the Wilkins-Rogers Milling Company, manufacturing *Washington Flour*.¹¹⁸

At least 27 grocery and feed stores were built along the canal at the following locations:

Lock No. 6	ca. 1873	Lock No. 28	ca. 1864
Lock No. 10	ca. 1873	Lock No. 29	ca. 1864
Lock No. 13	ca. 1871	Lock No. 30	ca. 1863
Seven Locks	ca. 1873	Lock No. 33	ca. 1859
Lock No. 20	ca. 1851, 1869	Lock No. 37	ca. 1876
Lock No. 22	ca. 1870	Lock No. 39	ca. 1866
Guard Lock No. 2	ca. 1870	Lock No. 41	ca. 1877
Lock No. 23	ca. 1883	Lock No. 46	ca. 1865
Lock No. 24	ca. 1873	Williamsport	ca. 1866
Edwards Ferry	ca. 1864–65	Lock No. 50	ca. 1865
Lock No. 25	ca. 1872	Lock No. 51	ca. 1866
Conrad's Ferry	ca. 1863	Lock No. 52	ca. 1865
Lock No. 27	ca. 1866	Dam No. 6	ca. 1865
		Oldtown	ca. 1859

In addition, a number of concerns in the vicinity of the eastern and western terminuses of the canal in Georgetown and Cumberland, respectively, catered to the grocery and mule-provender needs of the boat.¹¹⁹

Because the Baltimore & Ohio Railroad concentrated on the through east-west trade, it provided fewer opportunities for profitable sideline businesses in the Potomac Valley than did the canal. However, warehouses and wharf owners fared equally well from the trade and transfer business of both railway and waterway.¹²⁰ In fact the transfer business was perhaps the principal related benefit from the existence of the transportation lines. For instance, the canal directors reported that:

in 1874 the boatmen received for their services \$1,070,000, the wharf owners \$344,000, while the canal company received from tolls on coal and boats but \$428,000 for maintaining and operating a work which cost over \$11,000,000, being but \$84,000 more than was received by the wharf owners on their investment of about \$300,000.¹²¹

The handsome return on the relatively small capital outlay of the Georgetown and Cumberland wharf owners disturbed the canal board. At the same time that the private owners were making large profits, their rates were so high (8 cents per ton of coal at Cumberland and 25 cents per ton at Georgetown) that they forced the canal directors to reduce their charges on the coal trade in order to compete with the railroads for business.¹²²

¹¹⁸ Mitchell, *Divided Town*, 158–161.

¹¹⁹ See Chapter XVI of this study for more information on this.

¹²⁰ See Appendix C for a "List of Warehouses along the Chesapeake & Ohio Canal: 1850–1890."

¹²¹ Anonymous newspaper article in Gorman Collection. See 126 A.

¹²² Cumberland *Times*, May 31, 1873, and Washington *Daily News*, March 2, 1875, in Gorman Collection. In Appendix II of this report is a list of the Georgetown coal yards and wharves using water power from the canal to unload and ship coal as well as those not using water power to ship coal during the period 1856 to 1880. This data may be seen in Appendices D and E of this chapter.

Accordingly the board dredged the Rock Creek Basin and repaired the outlet lock in order to make the river bank available for wharf facilities, and these actions soon forced the average cost of wharfage to be reduced by 10 cents per ton at Georgetown.¹²³

On the other hand, at Cumberland the canal company leased two-thirds of the Potomac Wharf from Consolidated Coal Company in March 1875 and cut rates until the private wharf owners were forced to cut theirs.¹²⁴

Later in July 1878, the company followed the example of the Baltimore & Ohio Railroad, which had earlier secured its own wharf facilities at the town, by purchasing the Basin Wharf property from Welsh and McKaig for \$86,000. Since it was the largest wharf on the canal basin, the canal company secured permanent control over wharfage at that end of the canal.¹²⁵

F. COMPETITION BETWEEN THE CANAL AND RAILROAD

Perhaps the most direct advantage to the citizens of the Potomac Valley from the operation of the two transportation lines was the limited commercial competition which developed. There were at least four focal points of the rivalry which were of sufficient importance to merit attention.

In the earliest days, the struggle for the lions' share of the valley trade occurred at Point of Rocks, this was the location where the railroad first entered the immediate confines of the valley and hence where the two lines first met on confrontation. The railroad completed its line to Point of Rocks in April 1832, three months after the settlement of controversy over the legal right-of-way of the two works. On the other hand, the canal was not opened above Dam No. 2 until November 1833 because of its need to reach the Harpers Ferry feeder to provide water for the 40 mile section between Seneca and the Ferry. Within months of the arrival of the railroad at Point of Rocks, several warehouses and other facilities were built at the town for the transfer to the rail line of agricultural produce, lime, timber and stone brought down the river from the upper valley and across the stream from Loudoun County, Virginia. When the canal reached the town, it attempted to acquire its share of this trade for shipment to the District Cities. Even after the canal and railroad extended their lines westward, the town remained an important transfer point and a place where the two lines competed for business.¹²⁶

The rivalry over the Shenandoah wheat and flour trade at Harpers Ferry during the early 1840s was a renewal of the difficulties which had occurred during the preceding decade when the railroad attempted to block the canal's access to the Virginia side of the river at that strategic point.¹²⁷ Beginning in 1840, merchants engaged in the flour trade in Baltimore petitioned the railroad executives stating that the low rates charged for the shipment of flour on the canal (2 cents a barrel per mile for the first 15 miles, and 1½ cents a barrel per mile thereafter) were diverting that product from their city to the District of Columbia. Since the flour trade constituted a key portion of the Baltimore economy, the railroad quickly took steps to acquire a dominant share of the developing Shenandoah wheat and flour trade. Until May 1, 1841, the charges by rail from Harpers Ferry to Baltimore were 34 cents a ton plus 3 cents for handling (a ton amounted to 10½ to 11 barrels). On May 1, the railroad raised the rate to 50 cents, including handling, and sent a petition to the canal company to raise its toll to a "profitable rate." Soon the canal board raised its toll on

¹²³ Sanderlin, *The Great National Project*, 245–246.

¹²⁴ *Proceedings of the President and Board of Directors*, M, 291; *Cumberland Times*, March 20, 1875, in Gorman Collection; and Tilghman to Gorman, May 17 and June 14, 1875, Hall to Gorman, Jan. 15, 1876, Graham to Gorman, Jan. 5, and Feb. 28, 1877, and Hicks to Gorman, Apr. 20, 1877, Ltrs. Recd., C & O Co.

¹²⁵ *Proceedings of the President and Board of Directors*, N, 56–57.

¹²⁶ Reizenstein, *An Economic History of the Baltimore & Ohio*, 26–27, and *Niles' Register*, Vol. XLV (Nov. 23, 1833), 199.

¹²⁷ Sanderlin, *The Great National Project*, 193–195.

flour to a flat rate of 2 cents a barrel per mile. Within a month, on June 3, 1841, the railroad reduced its rates to 34 cents a ton, including handling. It was reported that the charges from Frederick to Baltimore were 30 cents, thus making the additional charge for the 21 miles from Frederick to Harpers Ferry a mere 4 cents. As a result, the flour trade on the canal from the Ferry fell off by over 4,400 barrels as compared with the previous year. A large amount of this decrease was attributed to the maneuvering of the railroad company.¹²⁸

Again, in 1844, leading citizens in Alexandria complained of the loss of the flour trade to the Baltimore millers.¹²⁹

In 1845 the Baltimore & Ohio intensified its efforts to win the flour trade from the canal. Its board of directors resolved "to reduce charges only along that portion of the road that was adjacent to the Chesapeake & Ohio Canal to a minimum which would at least pay the expenses of transportation." At the same time the railroad sought to place obstacles in the way of the transfer of canal trade across the river at Harpers Ferry. It continued to charge at the rate of 20 cents a ton per mile for goods shipped one-quarter mile over the viaduct, although it had agreed to a maximum rate of 8 cents. It refused to allow the use of its own cars, and those of the Winchester and Potomac Railroad were forced to pay a high fee to participate in the trade. Delay was a common occurrence in the landing of what little business that was transacted at the Ferry.¹³⁰

Competition for the Shenandoah wheat and flour trade, as well as that of Washington County, led to a short rate war in 1876 from which the local farmers profited. In the wake of the Panic of 1873 which struck the Potomac and Shenandoah Valleys with full force in 1876, the railroad attempted to hold its share of the declining trade by reducing its charges on grain by 4 cents per bushel from that point to Baltimore. In an effort to compete with the railroad, the canal lowered the toll on grain and flour from 1 cent a ton per mile to $\frac{3}{4}$ cent a ton per mile from all points between Williamsport and Weverton to Georgetown.¹³¹

The struggle for the Cumberland coal trade, which began in the late 1840s, not only proved to be the decisive factor in the course of canal trade and prosperity but also served as a boon to the Allegany County coal companies. From December 1873 until March 1845, the railroad and the canal cooperated in the handling of the lucrative business. According to their agreement the railroad, which had reached Cumberland in November 1842, undertook to carry all the coal offered for shipment via the waterway over its own tracks to the western terminus of the canal navigation at Dam No. 6 at the special rate of 2 cents a ton per mile.¹³²

When the state legislature passed the bill providing for the completion of the waterway to Cumberland in March 1845, the railroad and its ally, the City of Baltimore, began an all-out assault on the trade of its arch competitor. The Baltimore City Council approved an ordinance to allow the railroad to run its tracks into the city to a new depot on the south side of the harbor where vessels could dock free of port charges. The city authorities also encouraged the railroad to lower its charges on coal shipments. According to *Niles' Register* on April 12, 1845, such actions would encourage the coal and iron companies and the western county people to keep up the spirit of a competition, which however ruinous to canals and railroads, would enable them to get their material wealth and products to markets, for a mere song, the very thing for them.¹³³

¹²⁸ Elgin to Ingle, Dec. 23, 1841, Ltrs. Recd., C & O Co. and Reizenstein, *An Economic History of the Baltimore & Ohio*, 82-83.

¹²⁹ Maccubin to Turner, Nov. 6, 1844, Ltrs. Recd., C & O Co.

¹³⁰ Reizenstein, *An Economic History of the Baltimore & Ohio*, 83, and Elgin to Coale, Nov. 2, 1845, Ltrs. Recd., C & O Co.

¹³¹ Cockrell and Engle to Gorman, Jan. 26 and Mar. 8, 1877, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, M, 255, 258.

¹³² *Niles' Register*, Vol. LXVI (June 22, 1844), 272; *Proceedings of the Stockholders*, C, 243-245; and McLane to Coale, Sep. 17, 1843, Ltrs. Recd., C & O Co.

¹³³ *Niles' Register*, Vol. LXVIII (Apr. 12, 1845), 85

One month later, the Baltimore & Ohio abruptly terminated its arrangement for the transportation of coal from Cumberland to Dam No. 6, doubling its rates to 4 cents a ton per mile.¹³⁴

Competition for the declining Cumberland coal trade in the aftermath of the Panic of 1873 proved to be a boon to the Allegany coal companies as both of the transportation lines slashed their rates in an effort to retain their share of the commerce. Until 1876 the canal and the railroad had a general understanding to charge moderate rates on coal that were published and applied to all shippers. In that year, however, the railroad began to offer rebates of up to 20 cents per ton to some shippers. After the canal company announced its 1877 rates, which were 33 cents a ton per mile or 8 cents less than the 1876 price, the railroad lowered its charges 22 cents below the published rates for 1876 to \$1.81 per ton from Cumberland to Baltimore. At the same time, it offered "Kickbacks" of up to 20 cents per ton to any coal company that would transfer its entire trade from the canal to the railway. As a result, the canal board lowered its toll on coal to 22 cents a ton per mile in August 1877.¹³⁵

The rate war between the two lines subsided between 1878 and 1882, but the battle resumed during the last seven years of the independent existence of the waterway.¹³⁶ By 1885 the railroad was carrying coal to deep-water docks in the Port of Baltimore for \$1.30 a ton, and there were reports that rebates to the coal companies often lowered the cost to \$1.00 a ton.¹³⁷ Accordingly, the debt-ridden canal was forced to lower its tolls from 51 cents a ton per mile to 36 cents in June 1883, to 33 cents in April 1884 and to 22 cents in February 1885.¹³⁸

¹³⁴ McLane to Coale, May 7, 1845, Ltrs. Recd., C & O Co., and Coale to McLane, May 9, 1845, Ltrs. Sent, C & O Co.

¹³⁵ *Proceedings of the President and Board of Directors*, M, 293–296, and N, 4; *New York Herald*, Apr. 6, 1877; and *New York Times*, Apr. 20, 1877 in Gorman collection; and Lloyd to Gorman, Mar. 28, 1877, Loveridge to Gorman, Apr. 7, 1877, and Garrett to Gorman, May 19, 1877, Ltrs. Recd., C & O Co.

¹³⁶ *Fifty-First Annual Report* (1879), C & O Co., 6.

¹³⁷ Reizenstein, *An Economic History of the Baltimore & Ohio*.

¹³⁸ Sanderlin, *The Great National Project*, 314

V. IMPACT ON THE DEVELOPMENT OF TOWNS

One of the best ways to demonstrate the impact of the canal upon the Potomac Valley would be to examine its effect upon the towns in the area. As the waterway advanced up the valley, it promoted the development of many towns, which depended largely upon it for a livelihood. In some cases the influence was temporary, lasting only for a brief interval until the head of navigation moved westward. Several towns flourished to a greater or lesser extent as long as the canal was in regular operation. At least one town—Cumberland—took on a permanent position of socio-economic importance in the life of the valley.

A. GEORGETOWN

Founded near the head of tidewater on the Maryland shore of the Potomac River in 1751, Georgetown gradually became a colonial port of some importance. Shipping quickly became the chief industry of the town, as foreign and domestic vessels deposited manufactured good and wines as well as sugar, molasses and rum from the West Indies. In turn, the ships

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The coming of the Chesapeake & Ohio Canal aided in stemming the gradual decline of the old port's commercial importance and its disappearing coastwise and foreign trade. From the mid-1830s until the outbreak of the Civil War, the developing waterway contributed to a momentary revival of both the coastwise and foreign trade of Georgetown. The renewed coastwise trade in wheat, flour and agricultural produce, which began in the mid-1830s served to replace Georgetown's early coastwise commerce in groceries and merchandise. The renewed foreign trade with the West Indies involving mainly farm and forest products, which replaced the earlier exports of tobacco and flour, was short-lived in the face of competition from Alexandria's rising deep-water commerce.¹⁴⁰ Within Georgetown, the great tobacco and grocery warehouses of the 1820s were replaced by new flour and cotton [mills] using water power from the canal, and coal wharves for the transshipment of the Cumberland coal. Primarily because of the waterway's commerce, by 1856 Georgetown had numerous brick storehouses lining M Street, five flour mills on the canal, a 2,560-spindle, 84-boom factory of the Pioneer Cotton Company, several lumber and coal yards at the east and west ends of the water front, and thirty-three brick warehouses fronting south on K Street.¹⁴¹

Indicative, however, of the small economic gains arising from this transition, is the fact that Georgetown's population grew by only 292 inhabitants from 8,441 in 1830 to 8,733 in 1860, while during the same period the population of Washington was more than tripling from 18,826 to 61,122.¹⁴² The economic benefit brought to Georgetown by the canal during the antebellum

¹³⁹ Young, *Antebellum Commerce of Old Georgetown*, 1–6.

¹⁴⁰ Richard Plummer Jackson, *The Chronicles of Georgetown, D.C.* (Washington, 1878), 49.

¹⁴¹ Mitchell, *Divided Town*, 2–3, and Constance Green, *Washington*, (2 Vols., Princeton, 1963), Vol. I, 157

¹⁴² Green, *Washington*, 21.

period served to compensate the old port for the loss of its former trade and business, and for the increasing surrender of its foreign commerce to Alexandria. While the new enterprises in Georgetown did little more than replace the old, had it not been for this new business, largely produced by the canal, Georgetown's commercial life probably would have disappeared during the mid-1830s.¹⁴³

During the post-Civil War years, the foreign export and coastwise trade of Georgetown began to revive as a result of the burgeoning canal commerce. This revival was shorn by a growth in population of the town to 11,384 in 1840—the last year in which population figures are available for the town as its separate government was abolished by Congress in 1871 and it became part of the District of Columbia. Although the foreign trade of Georgetown remained negligible for the remainder of the 19th Century, a heavy coastwise trade in coal shipments began in 1867 and continued until the late 1870s when the canal's coal business went into a tailspin as a result of national depression, railroad competition and declining production in the coal field.¹⁴⁴

B. GREAT FALLS (CROMMELIN)

The canal company directors anticipated that a small community would develop at Great Falls on the strength of the canal trade, the attraction of the area for leisure activities by Washington and Georgetown residents, and the possibility of water-powered manufactories along the canal banks. Accordingly, the board approved the following resolution on June 10, 1831:

Whereas, the Chesapeake & Ohio Canal Company are indebted to the confidence, liberty and enterprise of the Messrs Crommelin of Amsterdam, for the facilities afforded by their loan to the cities of the District of Columbia, for the payment of one million and a half of stock subscribed to the construction of the canal; be it therefore resolved, that in all orders and proceedings of the Board, the grounds belong to the Company and the Buildings erected thereon, at or near the Great Falls of the Potomac, be hereafter named "Crommelin".¹⁴⁵

The projected development at Great Falls, however, never reached an advanced stage of development. Aside from the tavern facilities in Crommelin House, the expectations for Great Falls amounted to little more than the construction of several canal company maintenance shops, a mule stable and feed house, a grocery store, a horse stable and buggy shed, and a few residential dwellings. The known structures, along with their approximate dates and location were as follows:

Lock "Shanty"—ca. 1899—located at northwest corner of Lock No. 20. Stable and Feed House—ca. 1900—located at northwestern edge of towpath, abutting the spillway at Lock No. 20 (ca. 1913—buildings removed to site on towpath 350 feet north of Lock No. 20). Carpenter Shop—ca. 1830—located about 1,000 feet north of the tavern on the berm bank of the canal (destroyed by fire and replaced by new shop between 1893 and 1896).

Collier Dwelling—ca. 1859—located about 350 feet north of the tavern on the slope of the hill just beyond the northeast corner of the old gatehouse of the Washington Aqueduct (ca. 1875 moved to site about 250 feet north of the tavern and occupied by

¹⁴³ Young, *Antebellum Commerce of Old Georgetown*, 176.

¹⁴⁴ Young, *Antebellum Commerce of Old Georgetown*, 167–168, and Green, *Washington*, 21. See Appendix of this study for a "List of the Chief Retail Coal Dealers Near the Chesapeake & Ohio Canal in Georgetown: 1860–1880" and Appendix G for a "Diagram of Georgetown Showing C & O Canal and Riverfront Development: 1830–1900."

¹⁴⁵ *Proceedings of the President and Board of Directors*, B, 382–383.

Richard Collier, a canal employee, who resided in the house until about 1896 when it was razed by the canal company). Canal Company Residence—ca. 1850—located above the southern edge of Conduit Road and at a point about one-quarter mile northeast of tavern (destroyed by fire in 1889). Garrett Stone—ca. 1869—located on western edge of towpath near northern end of Lock No. 20 (ca. 1879 larger two story building containing a storeroom, office, saloon and living quarters erected on same site; structure razed by canal company ca. 1910).

Two Frame Dwellings and Log Cabin—ca. 1873—1884—located along the berm bank of the canal immediately to the south of the tavern (built by Howard A. Garnett for residential purposes). Buggy Shed and Stable—ca. 1890—located on the berm bank of the canal some 50 and 75 feet northeast of Lock No. 19 (razed ca. 1913).¹⁴⁶

C. SENECA (RUSHVILLE)

Seneca, the first western terminus of the waterway, also held the spotlight briefly in the early 1830s. The canal directors anticipated that a small community would develop between Dam No. 2 and the mouth of Seneca Creek for the following reasons: (1) the growth of canal trade; (2) the expected emergence of the area to serve as an outlet for the large grain production of the surrounding region; (3) the large pool formed by the dam which would provide an opportunity for the canal to tap the trade of upper Fairfax County and lower Loudoun County in Virginia; (4) the timber resources of the surrounding region; (5) the further development of operations at the already famous red sandstone quarries; and (6) the possibility of water-powered manufactories along the banks of Seneca Creek and the canal. Accordingly, the directors on June 10, 1831, passed a resolution naming the site Rushville, in honor of Richard Rush, the former Secretary of the Treasury who had negotiated the loan from the Dutch capitalists, enabling the District Cities to pay their subscriptions to the canal stock.¹⁴⁷

As the canal advanced westward, the spotlight moved with the construction and the hopes for the development at Seneca were never fully realized. The nearby red sandstone quarry, which had been in use prior to the American Revolution, continued to be operated until about 1900. Built during the late 1830s, the stone mill near the quarry was used to cut and dress the stone, the power for such work being supplied by water from the canal. At its peak in the post-Civil War era, the mill employed some 100 men, and the stone was shipped to Georgetown and Washington where it was used in the popular “brownstone” architecture of the period. Several warehouses were built along the canal in the 1870s to store wheat and flour produced in the surrounding region preparatory to shipment down the waterway to the District Cities. Throughout the history of the canal period, gristmills were in operation on Seneca Creek about $\frac{1}{2}$ mile from the waterway—the last mill being operated by the Tschiffely family from 1900 to 1931.¹⁴⁸

¹⁴⁶ Rogers W. Young, *A Preliminary Historical Study on the Area Along the Maryland Shore of the Potomac at great Falls during the Heyday of the Chesapeake & Ohio Canal: 1858–1880*, (NPS Manuscript, 1939), 19–26, 35–40. A number of buildings were also constructed at Great Falls relating to the Washington Aqueduct project. Among these were the old gatehouse, several temporary construction sheds and shanties, a brick and stone residence, a garage, and several frame dwellings. *Ibid.*, 30–34.

¹⁴⁷ *Proceedings of the President and Board of Directors*, B, 382–383.

¹⁴⁸ Jane Chinn Sween, *A History of Dawsonville and Seneca, Montgomery County, Maryland* (Md. Hist. Soc., Mass., 1967), 69–70, and *Proceedings of the President and Board of Directors*, L, 454, 467, and M, 5.

D. POINT OF ROCKS

A flourishing commercial enterprise sprang up at Point of Rocks in the early 1830s under the joint impact of the Baltimore & Ohio Railroad and the Chesapeake & Ohio Canal. As the western terminus of the railroad during the legal controversy with the canal over the right-of-way between an important exchange point where freight was collected from the surrounding area on both sides of the Potomac for shipment to Baltimore. Later in November 1833 when the canal was opened to navigation from Seneca to Harpers Ferry, Point of Rocks became an important exchange point between the two transportation lines as well as a center from which the canal tapped the agricultural commerce of upper Loudoun County, Virginia.

A contemporary description of the community appeared in the *Frederick Times* in November 1833, shortly after the canal was opened to Harpers Ferry:

The Point of Rocks is now the point of attraction, and really presents, as we are told, an animating scene. Railroad cars and canal boats, constantly arriving, interchanging passengers and cargoes and then departing—the bustle of a little village suddenly arisen, as it were, out of the earth and actually doing business of a commercial emporium—its inhabitants hardly yet acquainted with each other, and very often outnumbered by the transient strangers who throng thither in pursuit of business and pleasure—the very novelty itself, of two great public enterprises so long at war with each other, just going into harmonious operation upon the spot which may be called the battle ground; and that spot too so lately unknown save to the wild foxes of the mountains—in a word, the noblest exhibitions of art and nature contending for mastery, are the rich reward of those who may find it convenient to make an excursion upon the canal via the Point of Rocks.¹⁴⁹

But the prosperity of the village was only temporary, and it declined rapidly as the canal was opened to Dam No. 4 by the spring of 1834 and the railroad was completed to Harpers Ferry by December 1834. Despite its declining prosperity, Point of Rocks was laid out in regular lots in 1835 by H. G. O'Neal for Charles Johnson. Depending largely on the canal and railroad for its livelihood, the town remained a small hamlet at the eastern foot of Catoctin Mountain, reaching a population figure of 290 in 1880.¹⁵⁰

E. BRUNSWICK (BERLIN)

The town of Berlin was originally laid out in 1870 by Leonard Smith. In early times, the town had a flour mill and considerable trade with the surrounding countryside. When the canal and railroad reached Berlin, they brought a temporary increase in economic and commercial activity. The increased prosperity declined as both works pushed westward, although Berlin continued to profit as a result of its location on the canal and railroad. The town served as a profitable conduit for trade between the two transportation lines and Loudoun County as it was a widely-used Potomac River crossing point at first by the use of a ferry and after 1858 by a bridge. In December 1874 Berlin was described by the *Cumberland Times* as "a small village of Frederick County, containing sixty voters" whose principal business was "the mill of Messrs. Jordan, Graham and Wenner, which is run by the water from (the) canal." By 1880 the population of the town had increased to 217, and within another decade the population had grown to 300. When the Baltimore & Ohio

¹⁴⁹ *Frederick Times*, quoted in *Niles' Register*, Vol. XLV (Nov. 23, 1833), 199

¹⁵⁰ Schoaf, *History of Western Maryland*, Vol. I, 369–370 and Thomas John Chew Williams, *History of Frederick County, Maryland* (2 Vol., Frederick, 1910), Vol. I, 321–322.

built its railroad yards at Berlin in 1890, the town and its population grew rapidly. Because of its rising importance as a railroad center, the name of the town was changed to Brunswick in order to avoid confusion with another town in Maryland by the same name.¹⁵¹

F. KNOXVILLE

Knoxville was another little valley community, which prospered for a brief period in the 1830s and 1840s as a result of the increased trade, brought by the canal and railroad. On September 12 and 19, 1849, the Frederick *Examiner* described the town as a flourishing community with bright prospects for economic development as a result of its close proximity to Weverton and the two transportation lines:

there are a number of improvements now in progress at this place and in contemplation that must render it in a few years a place of very great importance . . . There is a large hotel erecting and several other buildings in contemplation. The Messrs. Barken and Co., from Baltimore, a wealthy company, have secured the most valuable mines of iron [that] are on the Shenandoah and Potomac Mines above this place, and have lately made a purchase of Col. Richard Johnson, adjoining Knoxville, of some twenty acres of land lying immediately between the Railway and Canal and was purchased at a reduced price, considering the very favorable location. The Company are now erecting a large furnace, storehouse and intend putting up between twenty and thirty other buildings for their workmen. This Company have several other furnaces in operation, but have selected this location believing it the most desirable as they can manufacture iron here at from five to seven dollars cheaper than at any other location in Maryland . . . The advantages are so manifest that they must and will command the attention of Iron masters and manufacturers. Messrs. Barker and Co. . . intend to extend their operations to a valley Mill foundry and Nail Factory.

These expectations were not fulfilled, however, and the town declined steadily after this time. In 1880 it had a population of 265.¹⁵²

G. WEVERTON

Weverton was named after Casper W. Wever, a celebrated engineer connected with the Baltimore & Ohio Railroad, who had been associated formerly with the construction and laying out of the National Road, the first bridge at Harpers Ferry, and Pennsylvania Avenue in Washington, D. C. Attracted by the possibility of utilizing the water power of the Potomac River at this point and of taking advantage of the railroad and the canal to transport finished goods to Baltimore and the District Cities, he formed the Weverton Manufacturing Company and purchased 500 acres of land in 1834 on which he intended to build a manufacturing town similar to that at Lowell, Massachusetts. Along with the land, he purchased the rights to the water power of the river from his acreage to Harpers Ferry, some 3 miles distant. The fall of water in that stretch of the river was ap-

¹⁵¹ Williams, *History of Frederick County*, Vol. I, 39, 238–239; Cumberland *Times*, Dec. 1, 1874, in Gorman Collection; David H. Brown, *Bridges at Berlin* (c. Burs. Artz Library MSS., Frederick, 1953), 1, 3; John R. Miele, *A Physical History of the Chesapeake & Ohio Canal* (NPS MSS., 1968) 131–133; and Scharf, *History of Western Maryland*, Vol. I, 369–370.

¹⁵² Frederick *Examiner*, Sept. 12 and 19, 1849, quoted in Williams, *History of Frederick County*, Vol. I, 274, and Scharf, *History of Western Maryland*, Vol. I, 369–370.

proximately fifteen feet—estimates to amount to 200,000 horsepower, which was sufficient to turn 3,000 spindles—and it was his intention to furnish the water power at an annual rental.

When his projected plans were delayed by the economic depression in the late 1830s, Wever attempted to broaden the financial base of the new community by forming a joint stock company in 1847. The leaders in this new venture were George Jacobs of Waynesboro, Pennsylvania, as president, Martin Kinsell of Chestnut Hill, Pennsylvania and Captain Hezekiah Boteler, Edward Garrott, Lewis Bell, John Gray and Barton Boteler as directors.

In May 1847 the first sale of lots was advertised. Twenty-six plots were sold at an average price of \$75, amounting to \$1,800 for less than an acre of land. A contract was made with Joseph P. Shannan to construct a dam across the river for \$25,000, the work to be supervised by Charles B. Fisk, the chief engineer of the canal. Lots were offered at a nominal price for factory sites and free to any church, all with the proviso that no liquor should be sold.

In 1849 Joseph G. Chapman of Charles County, Maryland, succeeded Jacobs as president of the company and James M. Buchanan was elected counsel, Barton Boteler, Treasurer, William Loughridge general agent, and Casper W. Wever, secretary. Soon thereafter, three large factories were built at the town—a large cotton mill by the Potomac Company, a rifle factory by the Henderson Steel and Manufacturing Company, and a marble work by William Loughridge. A number of boarding houses for the workers also were constructed.

A series of articles in Frederick newspapers in July and September 1849 described in glowing terms the success of the venture at Weverton and its bright prospects for the future. The development was compared with the successful experimental “textile city” at

Lowell, Massachusetts, which had been in operation since the late 1820s, as well as other new industrial developments in the United States.

All the high expectations for a great manufacturing center perished soon thereafter with Wever's untimely death in late 1849. The recently built factories were closed down and the property of the joint stock company was advertised at public sale by Samuel B. Preston, a local constable, to satisfy the claims of Jarvis Spencer and Joseph I. Merrick. Later in 1852, the major freshet that struck the Potomac Valley did considerable damage to the Weverton works.

In the aftermath of the Civil War, at least one mill was opened for operation. During the spring of 1886 the canal company made provision to transfer power for a mill owned by Merrill and Grafton.

After the devastating flood in 1877 the canal company purchased the cotton mill and the file factory. The mill, which had never been put into operation, was torn down, and the file factory was sold to Chapman and Stewart. By 1880 much of the property in the little village of 100 persons was for sale at low prices. Jasper Kandell had become the owner of all the water rights, but apparently only one mill was in operation—a flour mill owned by David Rinehart.¹⁵³

H. SANDY HOOK

Situated on the Maryland side of the Potomac River just below Harpers Ferry, the village of Sandy Hook flourished under the influence of the railroad and canal. Receiving its name from a quicksand pool in which a teamster lost his team on the road to Frederick, the settlement had two houses in 1830. As a result of the growing trade induced by the two transportation lines, the village continued to grow until it had 373 inhabitants in 1880. This growth was enhanced by the canal company's decision to construct the Shenandoah River Lock in 1832–33 to permit boats de-

¹⁵³ Scharf, *History of Western Maryland*, Vol. I, 369–370; Vol. II, 1284–1285; Williams, *History of Frederick County*, Vol. I, 271–174; *Frederick Citizen*, July 13, 1849, and *Frederick Examiner*, Sept. 12 & 19, 1849, quoted in *Ibid; Proceedings of the President and Board of Directors*, K, 490; and Rothbury to Coale, Oct. 17, 1850, and Masning to president and Directors, Apr. 12, 1866, Ltrs. Recd., C & O Co.

scending the Shenandoah River to cross the Potomac and enter the canal near the village. The company also built a number of shops there for the maintenance of the canal. According to the Baltimore *Gazette* on November 30, 1874, a large force of workers were employed at the company shops producing new lock gates and other articles for use on the waterway. Included in the canal company building complex were a carpenter shop, blacksmith shop, cart house, tool shed, storehouse and dwelling house as well as several warehouses for the storage of repair materials for the canal.¹⁵⁴

I. HARPERS FERRY

Harpers Ferry succeeded Point of Rocks as a commercial emporium. Because of its location at the mouth of the Shenandoah River, it served as both the outlet for the trade of that valley and as the point of deposit for that of the upper Potomac. Its commercial position was not solely dependent on the railroad or the canal, nor was it of recent development. First settled in 1733 by Peter Stephens, Harpers Ferry already had a long history as a depot for North-South and East-West trade. Thus its increased prosperity under the influence of the coming of the canal in November 1833 and the arrival of the railroad in December 1834 was better grounded and more permanent than that of most of the valley settlements. During the years from 1830 to 1850, the population of Harpers Ferry increased from 1,379 to 1,747. On the eve of the Civil War, the industries on Virginian Island included two cotton factories, a sawmill, a flour mill, a carriage factory and an ironwork. The nine large brick buildings of Hall's Rifle Works supplemented the other thriving manufactories along the river. The most important industry, however, was the United States Armory and Arsenal, established by Congress in 1796.¹⁵⁵

J. SHEPHERDSTOWN

Shepherdstown, which had been settled by Pennsylvania Germans as early as 1730, received economic stimulus from the canal as the site of lime mills supplying the major portion of the cement to the canal contractors during the early years of construction. After the canal was completed to Dam No. 4 in the spring of 1834, it carried a large amount of the town's trade.

As one of the oldest towns in the Potomac Valley, Shepherdstown took an active interest in the economic development of the region through the promotion of internal improvements. The town of 1,326 inhabitants gave its full support to the canal project and subscribed \$20,000 of Canal Co. stock.

Sometime before construction was commenced on the canal, Henry Boteler and George Reynolds operated a flour mill, known as Potomac Mill, about 240 yards upstream from Pack Horse Ford, the historic Potomac River crossing just below Shepherdstown. The mill was powered by water impounded by a dam across the Potomac, commonly called Boteler's Dam. One of the most urgent problems that arose in connection with the construction of the canal was the procurement of an adequate supply of hydraulic lime. In January 1828 Robert Leckie, the inspector or masonry on the canal, undertook to locate a source of cement lime that would be both readily available and of adequate durability. Such a source was found on the Virginia side of the river in the vicinity of Potomac Mill, and after some negotiations, the canal company persuaded the two proprietors to convert a portion of their mill to the manufacture of cement. Kilns were erected nearby, and extensive experiments were conducted in order to develop a durable water lime. Al-

¹⁵⁴ Baltimore, *Gazette*, Nov. 30, 1874, in Spates Paper; Scharf, *History of Western Maryland*, Vol. II, 1284-1285; and Baltimore *Sun*, June 11, 1889.

¹⁵⁵ Bushong, *Historic Jefferson County*, 85, 126-127, 139, and Sanderlin, *The Great National Project*, 165.

though the mill was not extensively used by the canal company after 1837, it continued to play an important role in the economic activity of the region served by the canal until 1861 when it was destroyed by Federal troops. Rebuilt after the Civil War, the mill continued to operate until the turn of the 20th century.

Closely associated with the mill in its connection with the canal was the dam that provided the power for its operation. The impoundment formed a slackwater pool that occasioned the construction of a river lock in 1833–35 to provide access to the canal from the river. This made possible the tapping of an extensive Virginia trade, which was an important source of business for the canal. Barges were loaded on the Virginia (West Virginia) side, floated across the river, and entered the canal via the river lock. When the dam was destroyed in 1889, the slackwater was eliminated and the lock was filled in and incorporated into the towpath bank of the canal.¹⁵⁶

K. WILLIAMSPORT

Above Harpers Ferry the most promising site for industrial and commercial development along the canal was Williamsport. At this town, which was founded by General Otho H. Williams in 1786 at the junction of the Conococheague Creek and the Potomac River, conditions were favorable to the establishment of mills and manufactories utilizing water power. Dam No. 5, located only eight miles above the town, fed a relatively short stretch of the canal, thus making available ample surplus water. Williamsport might also become the channel for the trade of Hagerstown with the Eastern Markets via the canal.

Because of its location, Williamsport was actively interested in the development of transportation in the Potomac Valley. During the first three decades of the 18th century, the trade of Williamsport was largely with the District Cities by means of river boats. In September 1827 a group of citizens meeting in Williamsport formed an association to support the construction of a canal in the expectation that such a transportation line would enhance the commercial prospects, of the town.¹⁵⁷

When the canal reached Williamsport in April 1835, the town took on new life. *Niles' Register* observed:

We learn from the Williamsport *Banner* that the water was let into the canal below that place on the 1st inst. and it was expected that, in a few days, the canal would be navigable the whole distance from Dam No. 5, above Williamsport, to Washington City. The *Banner* says: 'The basin at the foot of Potomac St. has been for upwards of a week past, crowded with boats, arks, etc. laden with coal and flour, and that the busy, bustling appearance which the arrival of the boats has given to that part of town, in the vicinity of the canal, is truly gratifying, and brings to mind the wharves of a commercial city.'¹⁵⁸

On April 11, the Williamsport *Banner* reported:

Wednesday and Thursday last, the 8th and 9th instant, were busy days with us on the canal. The water was let into the level next below Williamsport, and the numerous vessels

¹⁵⁶ John F. Luzader, *Historic Sites, Shepherdstown, West Virginia* (NPS MSS., 1963), 1- 4; Miele, *Physical History*, 139–143; Sanderlin, *The Great National Project*, 81; Boteler to Mercer, Jan. 14 and 22, 1828, in U. S. Congress, House, Committee on Roads and Canals, *Chesapeake & Ohio Canal*, H. Rpt. 141, 20th Congress, 1st Session, 1828, 38–39, McFarland to Ingle, May 29, 1829, and McFarland to Leckie, July 23, 1829, Ltrs. Recd., C & O Co.; and Ingle to Boteler to Reynolds, Apr. 22, 1830, Ltrs. Sent, C & O Co.

¹⁵⁷ Scharf, *History of Western Maryland*, Vol. II, 1223, 1230 and Sanderlin, *The Great National Project*, 166.

¹⁵⁸ *Niles' Register*, Vol. XLVIII (Apr. 11, 1835), 89.

which had, within the previous few days, been literally wedged in our basins and canal, forming as complete a bridge of boats as ever crossed the Rhine, thronged and pressed to the lock, eager for passage below. As fast as balance beam and valve key could be plied, were they passed on amid the shouts of a number of our citizens, who had assembled to witness the novel sight. Of the number of vessels, which were admitted, we have not been duly informed; but our estimate, and we speak, we are sure, much within the number, is from fifty to sixty . . .

It was a glorious sight to see the numerous boats as they lay in the basin at night, each illuminated by a glowing coal fire, which cast a long level rule of light across the water; and the silence of night was not unpleasantly interrupted by the cries of the hoarse boatmen, as they were disturbed from their moorings by new arrivals, and driven to close contact with their neighbors; we heard diverse remonstrances, boisterous and uncouth against "scrounging," to make use of the navigator's expressive, however inelegant term.¹⁵⁹

The increase in commercial activity did not turn out to be of a temporary nature and Williamsport settled down to become perhaps the outstanding canal town along the route of the canal. On May 26, 1835, the *National Intelligencer* reported on the continuing developments at the town:

From Williamsport . . . we learn that that town has quite a lively appearance, from the bustle of business, present and prospective. Among other circumstances, consequent on the extension of the Canal thus far, we learn that two considerable iron-master in the neighborhood of Chambersburg, in Pennsylvania, have agreed to send, each, five thousand tons of bar-iron and castings to Williamsport, this year, for transportation down the Canal, to be forwarded to New York, Massachusetts, etc. The advantage of this arrangement to them is, that the same wagons, which bring down the iron, can load back with coal from the Canal. For the purposes of this branch of business, a very large warehouse is now building on the margin of the basin of the Canal at Williamsport. We understand, further, that the officers of the company, on a late visit up the line of the Canal, made a disposition of water power to individuals at three different places in the vicinity of Williamsport.¹⁶⁰

Furthermore, the economic development of Williamsport was enhanced by the Baltimore & Ohio Railroad's decision to build its line west of Harpers Ferry on the Virginia side of the river. Thus, the rich flour and grain trade of Hagerstown and the Cumberland Valley was diverted to Georgetown through Williamsport via the canal, whereas previously most of it had gone to Baltimore via the National Road.¹⁶¹

Through the years, Williamsport, which grew from population of 859 in 1830 to 1,503 in 1880, depended on the canal for a large portion of its economic activity. The Williamsport *Pilot* observed on August 24, 1872, that:

There are 48 boats owned by citizens of this town, not counting the immediate vicinity. These 48 boats upon an average carry 5,000 tons of coal per trip. Allow each boat 20 trips per season and you have in round numbers 100,000 tons of coal carried to market by our boatmen. The toll upon this coal at 46 cents per ton would amount to \$46,000. Add to

¹⁵⁹ Williamsport, *Banner*, Apr. 11, 1835, quoted in Niles' Register, Vol. XLVIII (Apr. 25, 1835), 135.

¹⁶⁰ Washington, *National Intelligencer*, May 26, 1835.

¹⁶¹ Thomas John Chew Williams, *History of Washington County, Maryland*, (2 Vols. Hagerstown, 1906), Vol. I, 196.

this the toll on each boat for each trip, \$8.16, and you have \$7,833.60 more, in all the sum of \$53,833.60 earned by our boatmen during the course of a boating season for the company. Of course this is simply the coal trade, and does not include the local trade from this port, or have any reference to tolls collected here. The amount of flour, grain, etc., shipped from, and the amount of lumber, hoop poles, plasters, phosphate, etc. received here, is considerable.¹⁶²

Later that same year on December 21 the *Pilot* again discussed the heavy reliance of Williamsport on the canal trade for its general prosperity. Reporting on the town's coal trade for the 1872 boating season, the newspaper noted that:

The report is exclusive of a considerable amount of coal, the toll upon which was paid here, but which was not delivered exactly at the wharf at this place. . . The horse disease, low water, and the early close of navigation by the ice, rendered the season not only unprofitable to boatmen but made shipments much shorter than they would otherwise have been. The coal shipped by Mr. Cushwa was for the sole use and consumption of the Western Maryland Railroad Company (whose line was then being completed to Big Pool), and a great deal of it is on the wharf here yet awaiting wagon transportation to Hagerstown. That received by Messrs. Embrey and Steffey, respectively, was to supply not only the local demand, but manufactories of various kinds in Pennsylvania and those portions of Maryland lying along the line of the W. M. Railroad.

Victor Cushwa	4,234,.03	Tons cut
O. Embrey and Son	3,725.06	
E. P. Steffey	1,544.16	
Total	9,504.05	

The value of this coal at \$4.50 per ton, which is about the average, is \$38,018.20¹⁶³

The canal company's efforts in the early 1870s to promote the continued expansion of trade in both agricultural produce and coal by facilitating the construction of the Cumberland Valley Railroad and the Western Maryland Railroad, where those lines touched upon the canal's rights, were an added economic stimulus to Williamsport. Completed to the town on December 17, 1873, the Western Maryland ultimately provided a connection between the canal at Big Pool (above Williamsport) and Baltimore. The Cumberland Valley, which was opened to Martinsburg in 1874, ultimately provided a link between Harrisburg and Winchester, crossing the canal at Powell's Bend one mile below Williamsport. As a result of the new lines, it was estimated that the coal trade of Williamsport increased to the point that one-half of the town's population was involved in the shipment, unloading and transfer of coal. According to the Washington *Evening Star* on July 11, 1902, business on the canal at Williamsport was:

flourishing, there being a continuous string of boats to and from Cumberland. About 50 boats are unloaded there every month, carrying over 5,000 tons of coal. Large consignments of coal are also being shipped to Powell's Bend, 1 mile below, where it is transferred to the Cumberland Valley RR. New machines for unloading boats in use on wharves at Williamsport greatly facilitate business, about 3 times as many being

¹⁶² Williamsport, *Pilot*, Aug. 24, 1872, in Gorman Collection.

¹⁶³ Williamsport, *Pilot*, Dec. 21, 1872, in Gorman Collection.

unloaded as before. Shippers are full up with orders for coal, which is shipped over the Western Maryland railroad.¹⁶⁴

L. HANCOCK

Above Williamsport, the next major objective of the canal was Hancock, a small village of 367 inhabitants in 1830. Located on the National Road, the town was 100 miles from Baltimore and 39 miles from Cumberland. Because of its location, it acted as a center for the local trade of western Washington County, eastern Allegany County and the Cacapon Valley as well as a conduit for the East-West trade.¹⁶⁵

The canal company looked to Hancock as a prospective point where contact could be made with the turnpike from the west. Here it was hoped that the canal might secure some of the wagon traffic from as far west as the Ohio River. As early as October 4, 1834, *Niles' Register* observed that when the canal would be opened to Dam No. 5 during the following spring:

it will then be opened for navigation 110 miles; and, as the Dam No. 5 backs water of the Potomac up to Hancock, the navigation of the canal will be connected with the business on the national road, and Hancock becomes a temporary place of deposit between the east and west, whether from or to Washington, by the canal, or from or to Baltimore by the railroad, after its junction with the canal, either at Harpers Ferry or the Point of Rocks, as shall appear most expedient—and no doubt, canal boats will be fitted to receive the bodies of loaded wagons, as the railroad cars now receive them. There is much convenience, as well as safety, in this proceeding. The western merchant, at Baltimore or at Wheeling, personally inspects the stowage of his merchandise, if he pleases, and according to his own judgment of the manner in which it should be packed—with a confidence that it will not be changed until its arrival at the place of its destination . . .¹⁶⁶

Canal officials began making plans to exploit the trade potential of Hancock in March 1835 when the canal was completed to Dam No. 5 as evidenced in a letter written by President George C. Washington:

By the middle of March we shall have an unobstructed navigation of 110 miles, ready to receive the spring trade of the whole valley of the Potomac. Our upper dam (Dam No. 5), makes a backwater navigation of about ten miles, being within two miles of the Cumberland Road. At this point the water merchants of Wheeling etc. propose immediately to connect their lines of transportation and such by this means will be the saving, that they believe they can successfully compete with Pennsa (Pennsylvania) Canal. The lumber of the Cacapon region will also at this point, be brought into the canal, and we understand preparations are making at Cumberland to forward a quantity of coal.¹⁶⁷

However, the anticipated business did not develop as expected, primarily because the canal did not reach Hancock until April 1839 at which time the national economy was still in the throes of depression. By that date the Baltimore & Ohio was speeding its construction westward, and the

¹⁶⁴ Washington, *Evening Star*, July 11, 1902. Also see Baltimore *Evening Sun*, Aug. 12, 1937; Scharf, *History of Western Maryland*, Vol. II, 1005–1008 and 1230–1231; *Forty-Fifth Annual Report* (1873), C & O Co., 16–17; and Sanderlin, *The Great National Project*, 230–232.

¹⁶⁵ Scharf, *History of Western Maryland*, Vol. II, 1252, and Williams, *History of Washington County*, Vol. I, 196.

¹⁶⁶ *Niles' Register*, Vol. XLVII (Oct. 4, 1834), 65.

¹⁶⁷ Washington to Colston, Jan. 31, 1835, Ltrs. Sent, C & O Co.

Pennsylvania Main Line Canal had consolidated its hold on much of the anticipated trade of the southwestern portions of its state.¹⁶⁸

Nevertheless, Hancock did benefit from the canal and served as a center of local trade. By 1880 the town had grown to a population of 931 and had a number of stores, several grain and flour warehouses, and several boat yards, all of which were directly affiliated with the canal trade. The major business enterprise was the Round Top Cement Company located west of town and owned by Robert Bridges and Charles W. Henderson. Originally established in 1837 by George Shafer to supply the canal company with water lime, the cement works were purchased by Bridges and Henderson in 1963 and employed 120 men by 1880. After the cement was placed in barrels, most of it was run across the Potomac by cable to a company warehouse before it was transferred to the Baltimore & Ohio Railroad via switches that connected with the main line. The canal, which provided the water power necessary to run the mill, was used also as a medium for shipping the cement and for receiving the coal required to operate the kilns.¹⁶⁹

M. CUMBERLAND

The town of Cumberland at the mouth of Wills Creek is perhaps the greatest accomplishment of the Potomac trade route. Founded by the Ohio Company in 1749, it served as a natural center for the business and commerce of the upper valley and for the trans-mountain trade. In the aftermath of the Seven Years' War, fur traders and a few settlers began to move into the Allegheny and Trans-Allegheny region. Because of its location on the Potomac Valley route to the west, Cumberland was involved in every major effort to develop and improve transportation in the upper valley during the next century. The improvements on the river undertaken by the Potomac Company after 1785 ended at Cumberland. Construction of the federally-sponsored National Road began at Cumberland in 1811 and the pike was completed to Wheeling on the Ohio River in 1818, thereby making the town an important point in the East-West trade.¹⁷⁰

The completion of the railroad and the canal to Cumberland on November 1, 1842, and October 10, 1850, respectively, brought to the town a dependable means of transportation to the eastern markets and large transfer business in coal from mines in the Georges Creek region and farther west. During the decade from 1840 to 1850, the population of the town nearly tripled from 2,384 to 6,105. William H. Lowdermilk, a noted historian of Cumberland, has written concerning the significance of the railroad to that town:

No other event has ever transpired in the history of the place, which created so much pleasurable excitement. Business was entirely suspended, and men, women and children gathered about the terminus of the road to witness the arrival of the trains. From the mountain tops, and valley, throughout the adjoining country, the people came in crowds, and the town was in a fever of excitement for many days.

The opening of this road proved the inauguration of a new era in the history of the town. This was made the point of exchange for passengers and merchandise between the East and West. Hotels were erected for the accommodation of travelers, and large warehouses, along the railroad tracks, for the storing of goods, which were to be trans-shipped from cars to wagons for the West, and from wagons to cars for the East. The facilities thus furnished for rapid transportation induced many persons to make the journey across the mountains, and the stage companies were compelled to build new coaches and

¹⁶⁸ Miele, *Physical History*, 153 and Niles' Register, Vol. LVI (Apr. 17, 1839), 131-132.

¹⁶⁹ Scharf, *History of Western Maryland*, Vol. II, 1252 and 1256.

¹⁷⁰ Miele, *Physical History*, 160-161; Sanderlin, *The Great National Project*, 166-167; and Kenneth P. Bailey, *Thomas Cresap: Maryland Frontiersman* (Boston, 1944), 94.

to erect large stables. Every morning and evening upon the arrival of the cars, long lines of stages drew up in front of the hotels. Inside they carried nine passengers, and outside one on the seat with the driver. In the "boot" and on the roof was placed the baggage. When all were loaded, at a given signal, a dozen whips would crack, a dozen four-horse teams would take the road, and dash through the streets at a brisk trot, which would be kept up until Frostburg was reached, in less than two hours. Here horses were exchanged, and up the mountain grade they went, on their way to Wheeling.

In a little while after the completion of the railroad to Cumberland, the National Road became a thoroughfare such as the country has never before or since seen, for a like distance. On every mile of the road were to be seen stages, carriages and heavy freight wagons, carrying tons of merchandise piled up under their canvas-covered bows, drawn by six powerful horses. In addition to these, great droves of cattle, hogs, sheep, etc. were daily on the road. Taverns were to be found every few miles with jolly landlords, who knew all the teamsters, drivers and guards. These were "good old times" and the "pike boys" still living look back to them with many a sigh of regret.¹⁷¹

When the canal was formally opened to through navigation all the way to Cumberland on October 10, 1850, it was the occasion for elaborate ceremonies and jubilant celebration. Among the speeches was one given by William Price, a long-time canal promoter from the town:

It was natural, perhaps, that things should be precisely as they have been, both with the enterprise itself, and with the individuals whose fortunes have been connected with it. The uncommon magnitude, and the uncommon finish of the work, may be regarded as cause sufficient for all the alternations and disappointments attending its history. The reasoning of men, from their experience upon works of different dimensions and character, might have been expected to lead to disappointment when applied to a work like this.

Go view those magnificent aqueducts, locks and culverts, of hewn stone—those huge embankments, on which you may journey for days down the river; go view the great tunnel passing three fifths of a mile through rock, and arched with brick, its eastern portal opening upon a through-cut almost equal in magnitude to the tunnel itself. Look at the vessels lying in that basin ready to commence the work of transportation, and large enough to navigate the Atlantic, -- look at all these things, then think how soon the fortunes of individuals embarked in the prosecution of such an enterprise would be swallowed up, leaving upon it but little more impression than the bubbles which now float upon its waters. It will not be deemed out of place, if I here express the hope, that, those whose losses have been gains of the company, should not in the hour of its prosperity be forgotten.

It has been greatly decried and greatly misunderstood, but it is a magnificent work, whatever may be said to the contrary. Of its probable revenues now that it is completed, I see no reason to distrust the opinions heretofore entertained by its friends. And why should it not be as profitable as, from the first, it was expected to be? The same great coal deposits which originally induced its projection, and which have animated the hopes of its friends, during all the trials and vicissitudes of its history still lie in these mountains waiting an avenue to market. Its quality has in no wise deteriorated and is known to be such as to give it a preference over every other description of coal on this side of the Atlantic. The capacity of the coal companies have their railroads and other means of shipment upon the canal, completed. With such a staple and such an avenue to market, that is

¹⁷¹ Lowdermilk, *A History of Cumberland*, 349, 351–351, 371.

to limit the emoluments of the work? Coal, however is but one item of its trade. And when we look to the agricultural products of western Maryland, and of the contiguous portions of Virginia and Pennsylvania, and after all this, add to the account, the ascending trade, consisting of the merchandise for the supply of the territory already indicated, and a share of that destined for the west, it is no exaggeration to say, that the work will in due time pay off its own debt and leave the state in possession of a permanent fund, adequate to all her financial wants.

The opening of yonder gates to let through the first boat carrying freight from Cumberland to tide water, signals a happy epoch in the financial condition of the state. It is the turning point in history of the canal, and marks the precious moment of time, when this great work ceases forever to be a burden upon the tax-payers of Maryland, and begins to reimburse those who have so long and so patiently borne the charge of its construction. Such an event is cause of congratulations to the people of the whole state.¹⁷²

With the arrival of the canal, Cumberland again experienced greater prosperity based on the increased trade and transfer business developed by the waterway and from the related activities associated with its operation. The boom proved to be short-lived in its extreme form, however, for on January 10, 1853, the Baltimore & Ohio Railroad was opened for travel between Cumberland and Wheeling, and two great excursion trains passed over the road, from Baltimore to the Western terminus. The effect was soon felt in Cumberland, as most of the stage lines were taken off, and the great business of transferring merchandise at this point was largely diminished.¹⁷³

Thereafter the city settled down to a robust prosperity based primarily on the coal trade of the railroad and the canal and on its location at the western terminus of the waterway. Estimates of property values available for Cumberland in 1842 and 1860 show an increase from \$931,118 to \$2,124,000 and population statistics indicate that the city grew from 6,105 in 1850 to 7,302 in 1860, 1870, and 10,693 in 1880.¹⁷⁴

Cumberland secured a large amount of trade from the canal-related economic activities and from the boatmen between runs and during the winter. The economic impact of the canal on the livelihood of the town is revealed in a series of local newspaper articles in the 1870s during which time the waterway was facing increasing competition for its share of the coal trade from the railroad. On May 24, 1873, the *Cumberland Times* reported:

The shipments of coal by canal for the current season show a remarkable falling off from those of last year. By Mr. Slack's tables we find that the shipments to May 10th inst. over his road to the canal amount to 112,099.03 tons, against 136,887.08 tons to a corresponding period last year, showing a decrease for the present season of 24,758.05 tons; while the shipments by the same route to the Baltimore & Ohio Railroad amount to 474,290.02 tons against 414,705.01 tons to a corresponding period last year, showing an increase of 59,585.01 tons in favor of the railroad to a corresponding period last year. This estimate does not include companies that habitually ship by railroad alone, but puts the matter in the best light for the Canal Board.

For our city and for the large number of people who depend upon a successful canal season for a living, this is a poor showing, and the prospects for the future is far from reassuring. .

¹⁷² *Report to the Stockholders on the Completion of the Canal to Cumberland*, 130–132.

¹⁷³ Lowdermilk, *A History of Cumberland*, 376.

¹⁷⁴ *Ibid.* 381, 388, 492, and James Walter Thomas and Thomas John Crew Williams, *History of Allegany County, Maryland* (@ Vols., Cumberland, 1923), Vol. I, 124.

Canal shipments are what our people here are interested in. It matters but little to them how many hoppers go daily rolling by upon the railroad; they derive no benefit therefrom, but with canal shipments the case is different. Every additional ton of coal shipped by this route, adds its proportion to the prosperity of the city. Many boatmen live here; boats are built in our yards; feed and forage for stock are sold by our dealers, and our grocers derive a busy trade in canal supplies when the season is good. . .¹⁷⁵

A similar theme was noted by the Cumberland *Alleganian and Times* in three separate articles in April and May 1877. On April 30 the newspaper observed that:

The canal is the only present surety for Allegany's prosperity, and when its stability is endangered every citizen of the county has a bounden duty in its protection. Cumberland is probably more deeply interested in its success than any other section of the county, because she has more property dependent on it outside of the coal companies; but all of Allegany is deeply concerned. . .There are Eastern interests which demand Cumberland coal for its qualities; and their demands are sufficient to keep the railroad busy. There are other interests, which prefer our coal, while it can compete with other regions; but when the price is higher, they will take the other. This latter class is what we would lose if the canal should be closed, while the Baltimore company would charge its own price on the former. The canal is now in efficient working order throughout, and the tolls are lower than the Baltimore road. The canal terminates here, and its trade is local. Destroy its local traffic and it perishes. The Baltimore road is almost national, and our trade is not essential to its success. It can hedge us about. It can forgo profits on coal until it crushes us. .

¹⁷⁶

On May 5, 1877, the newspaper printed a detailed analysis of the economic impact of the canal on the city:

The principal income of this region is from the coal trade. When shipments are large, our businessmen feel the good results; when they are small, our trade interest lag. The coal shipped through Cumberland is beneficial to this region only to the extent of the cost of production, which benefits Cumberland only secondarily. It is the amount shipped by canal that results immediately to our benefit. . .Hypothetically, we will assume there are 30 boats leaving this port daily, carrying 115 tons each, at 80 cents per ton, making 180 boats per week, which would be a gross receipt of \$20,700 per week, employing 600 men and an equal number of mules. At least two-thirds of this money is disbursed in Cumberland, giving over \$16,000 per week, or \$70,000 per month. Aside from this, there are over 200 men employed here on the canal in various kinds of work—loading coal, repairing boats, cleaning basin, etc., which increases the receipts by not less than \$10,000 per month. Thus . . .it is reasonable to conclude that the people of Cumberland receive from this source not less than \$80,000 per month. Can we afford to lose this trade?¹⁷⁷

On May 15, 1877, the same newspaper observed:

¹⁷⁵ Cumberland, *Times*, May 24, 1873, in Gorman Collection.

¹⁷⁶ Cumberland, *Alleganian and Times*, Apr. 30, 1877, in Gorman Collection.

¹⁷⁷ Cumberland, *Alleganian and Times*, May 5, 1877, in Gorman Collection.

We have hundreds in Cumberland dependent on coal shipments by canal where Baltimore has 10 by rail. Five hundred canal captains have their all invested in their boats, and 2,000 men are subject to the captains. Our boat builders have tens of thousands dependent upon the employment of these men. Our businessmen derive one half their profits from the proceedings of the canal, and our landlords would get nothing for their houses if we lose our canal trade. The miner would decrease in his product were the canal out of the way; for the Baltimore road would have the monopoly of the trade, and would desire no more coal produced than its capacity would admit of carrying...

As further proof of the fact that the town could not rely on the Baltimore & Ohio, the article noted that the railroad-owned Cumberland Rolling Mill had just laid off 300 man and 100 boys.¹⁷⁸

By the time that the canal began to fall into decline in the late 1870s, Cumberland had developed an independent and permanent basis of economic prosperity and continued as an important industrial and commercial center. The economic diversification of the city during this period can be seen from a list of its principal business concerns:

1. Steel Rail Mill and Merchant Bar Mill owned and operated by the Baltimore & Ohio Railroad. The Baltimore *American* of May 7, 1877, reported on the positive economic impact of the railroads Rollin Mill on the growth of Cumberland:

In the fiscal year 1873–74, the Baltimore & Ohio Company employed an average of 853 man per month in the rolling mill in the second great city of Maryland, Cumberland. The total wages paid during the year at that mill amounted to \$432,858.55; 16,284 tons of metal were consumed at that mill, nearly all of which was purchased in the State of Maryland, and which was made at the furnaces in Washington, Frederick, Allegany and Baltimore counties. During that year the consumption of coal alone at the mill reached 100,000 tons, and there were large expenditures for other supplies...¹⁷⁹

2. Bowery Blast Furnace owned and operated by the Cumberland Coal and Iron Company.
3. Five Frederick Companies
 - a. Union Mining and Manufacturing Company at Mt. Savage.
 - b. Savage Mountain Firebrick Manufacturing Co. at Frostburg.
 - c. Globe Fireclay Manufacturing Co. at Bridgeport.
 - d. Savage Firebrick Manufacturing Co. at Keystone Junction.
 - e. Reese, Lemon and Co. at Ellerslie.
4. Two iron foundries and machine shops
5. Mills of Cumberland Cast Steel Works
6. Cumberland Cotton Factory
7. Cumberland Hydraulic Cement Manufacturing Company
8. Three steam tanneries in the city and two in the vicinity
9. Car, locomotive works, and machine shops of the Cumberland and Pennsylvania Railroad Company at Mt. Savage

¹⁷⁸ Cumberland, *Alleganian and Times*, May 14, 1877, in Gorman Collection. At the same time, the Baltimore (insert 225A)

¹⁷⁹ Baltimore, *American*, May 7, 1877, in Gorman Collection.

10. Several large flour mills
11. Steam furniture works of K. H. Butler (Largest furniture plant in the state)
12. Numerous other factories including planning and saw mills and sash and door factories¹⁸⁰

N. SUMMARY

Of the towns mentioned as receiving a definite stimulus from the operation of the canal or the railroad, only one achieved a permanent status as a result of these influences. Cumberland survived and prospered as the second largest city in the State into the 20th century. Projected communities such as Crommelin and Rushville never got off the ground. Towns such as Brunswick, Knoxville, Weverton and Williamsport which drew so heavily from the canal for their support declined with the fortunes of the waterway. Point of Rocks, Harpers Ferry and Hancock which were primarily exchange points in the valley trade, declined as through traffic replaced local business or survived on a lower level of economic activity and importance.¹⁸¹

¹⁸⁰ Orrick, *Mineral Resources and Manufacturing Facilities of Cumberland*, 7-31.

¹⁸¹ Sanderlin, *A Study of the History of the Potomac Valley*, 102.

VI. IMPACT ON THE POPULATION

The expanded transportation facilities and related activities of the canal and railroad played a part in the growth of population in Western Maryland. The statistics for the four counties through which the canal passed were as follows:

	1820	1830	1840	1850	1860	1870	1880
Montgomery	16,400	19,816	15,456	15,860	18,322	20,563	24,759
Frederick	40,459	45,789	36,405	40,987	46,591	47,572	50,482
Washington	23,075	25,269	28,850	30,848	31,417	35,712	38,561
Allegany	8,654	10,609	15,690	22,769	28,348	38,536	43,802 ¹⁸²

During this period the total population of the four Western Maryland counties in relation to the overall population of the state was as follows:

	State	Western	% of State
1820	407,350	88,588	21.7
1830	447,040	101,482	22.7
1840	470,019	96,401	20.5
1850	583,034	110,464	18.9
1860	687,049	124,678	18.1
1870	780,894	141,383	18.1
1880	934,632	169,779*	18.2 ¹⁸³

The percentage of change in the population of the Western Maryland counties in comparison with that of the population in the State as a whole during this period was as follows:

	Western	State
1820–30	+12.7%	+8.9%
1830–40	-5.0%	+4.9%
1840–50	+12.7%	+19.4%
1850–60	+11.4%	+15.1%
1860–70	+11.8%	+12.0%
1870–80	+16.7%	+16.4%

¹⁸² Scharf, *A History of Western Maryland*, Vol. I, 369–370, 654–656, Vol. II, 974, 1554, and Boyd, *History of Montgomery County*, 107. In 1836 Carroll County was established out of the eastern portion of Frederick and the western portion of Baltimore County, and in 1872 the western portion of Allegany County became Garret County. The latter had a population of 12,175 in 1880.

¹⁸³ Scharf, *A History of Western Maryland*, Vol. II, 1554. * The population of Garret County is figured in this statistic.

APPENDIX A

WATER POWER LEASES FOR MILLS ON THE C&O CANAL
IN GEORGETOWN: 1839-1900

LEASE NO. 1

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
George Bu- ford, Washington	Flour, to 1843 burned, 1844; rebuilt 1845, cotton from 1845—sold to Wilson, 1850	South of the canal, sw corner of the market space and Potomac St.	400	May 7, 1846	Jan. 1, 1838	Jan. 1, 1886, mill sold to Thomas Wilson, 1850
Thomas Wil- son, Baltimore, MD. Sublet to A. Pryor Williams and Co.	Cotton: 1860 to 1861		300	Transferred Renewed May 1, 1860	Jan. 1, 1860	Jan. 1 1859 Jan. 1, 1870 Mill closed 1861 Sold to A.H. Herr, 1865
Superior to 300 A.H. Herr Georgetown	Herr converted it from cotton to flour; And flour mill- ing "Pioneer Mill" began in 1867, 140' x 50' in size		300	Assignment Approved on Nov. 9, 1865	Jan. 1865	Jan. 1, 1879
Superior to 330 G. A. Herr Austin Herr (Herr & Cis- sell)	Flour		300	Transferred	Sep. 30, 1836	1900

LEASE NO. 2

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Joseph Hocks Of George-town			Surplus wa- ter of Rock Creek Basin		Feb. 27, 1840	Feb. 27, 1860 Abandoned in 1840. forfeited on Sep. 5, 1844

LEASE NO. 3

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Nathaniel and A.P. Scaver (or Seaver)	Bark Mill	N. side of Wa- ter St., be- tween Potomac and Market St., near rear Hotshot	50		Mar. 4, 1840	Withheld and suspended by Apr. 1847
V. Turner, Trustee For Mrs. A. Robinson (Estate of Wm. Robinson)	Remodeled as a flour mill, 1845	Practically the same site as Seever's mill	125	Renewed and 75 inches added	Apr. 13, 1847	Apr. 1, 1860 transferred to Coor & Schroder & Co.
Leased from Rob- inson: Ge- rald Wilson	Flour	Adjacent	125	July 1, 1861 Sublet to Wilson		July 1, 1857
L. Benjamin Darkey and John Shoemaker, Georgetown	Flour and grist	Known as the "Rivers De Mill" under Shoe- maker	125	Apr. 11, 1867	Apr. 1, 1860	Apr. 1, 1880 transferred to Shoemaker & Co. 1880 bought by Shoemaker & Co. 1864

LEASE NO. 4

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Thomas Brown	Bakery	N.E. Corner of Water and Lingan Streets	50		July 1, 1840	July 1, 1880
Successor to Brown: John Hutton	Flour and grist		50	July 6, 1860 Renewed	July 1, 1860	July 1, 1880 Transferred to Fenny in 1872
Successor to John Hutton	Flour and grist		50	Transferred Renewed Apr 14, 1837	Jan. 12, 1872 Jul 1, 1880	July 1, 1880 July 1, 1900

LEASE NO. 5

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Thomas J. Davis	Flour, built in 1841	N. side of Water St., between Lingan and Fayette St. and near the N.W. corner of Water & Fayette Sts.	500		Sep 1, 1841	Sep 1, 1861 Sold to Boyd & Taylor
Successor to Davis Boyd & Taylor	Flour		500		Mar 9, 1854 Bought by Boyd & Taylor	Sep 1, 1881 Assigned 1860 to Boyce, Thomas and

Successor to Boyd & Taylor: Alfred H. Herr and James S. Welsh	Flour, corn and plaster	Called the "Columbia Mill"; a 4 story brick structure, size 128' x 60'	500	Aug 1, 1862 Also assigned by Herr to Welch	Sep 1, 1861	Sep 1, 1881 Assigned to Welch on Apr 1, 1862
Successor of Herr and Welsh: Jim S. Voigh			500	Aug 1, 1862	Sep 1, 1861	Transferred to Proctor 1879
Successor of Voigh: Richard Proctor	Flour		500	Transferred	Sep 30, 1879	Transferred to Herr, 1880
Successor to Proctor: Austin Herr of Herr and Cissell	Flour		500	Transfer renewed	Jun 30, 1880 Sep 1, 1881	Sep 1, 1881 Sep 1, 1901

LEASE NO. 6

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
R. E. Duvall, Georgetown		N. side of Water St. between Fayette and Lingan. Between Brown's Bakery and Davis' Mill			Apr. 13, 1843	1848

LEASE NO. 7

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Miller and Duvall	Saw	S.W. Corner of Water and Fayette Streets	50		1844	1843 Sold to Rynax 1843
Successor to Miller and Duvall: John Rynax	Iron foundry		50		Jun 1846	1882
Successor to Rynax: Mark Young	Grist		50	1862	1862	Dec 31, 1880

LEASE NO. 8

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Successor to 108 of Hungford Alexander Ray, Washington, D.C.	Flour and grist	N.W. corner of Water and Potomac Streets	100	Assigned to A. Ray May 1, 1860 Renewal to A. Ray; Reassigned to A. Ross Ray & Bro.	Jan 1, 1839	Jan 1, 1859 Reassigned to A. Ross Ray & Brother by 1849 Jun 1, 1879
Andrew Abes May Washington, D.C. And Albert May Firm of A. Ross Ray and Brother	Flour and grist	N.W. corner of Water and Potomac Streets; known as the "Arlington Mill"	150 400	May 1, 1880	Aug 14, 1845 Apr 1, 1860	Apr 1, 1880 Apr 1, 1880
Successor of A. Ross Ray and Brother: A. Ross Ray and Brother	Flour		500	Renewed	Apr 1, 1880	Apr 1, 1900 Transferred Sep 30 1885 to G.W. Cissell
Successor of A Ross Ray and Brother: G.W. Cissell & Co	Flour		500	Transferred	Sep 30, 1885	1900

LEASE NO. 9

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Wm. P. McConnell and Co., Georgetown			25	Granted for 2 years. Not renewable	Oct. 2, 1847	Oct 2, 1849 Transferred to Morrow & Co., 1848
Successor to McConnell Company: Wm. Morrow and Company	Tannery		50	Transferred and increased to 50 inches	May 8, 1848	Tannery burned in Dec. 1849

LEASE NO. 10

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Thomas P. Morgan			Surplus water of Rock Creek Basin		Dec 21, 1849	Jan 20, 1880 Transferred to Morgan and Rhinehart, 1860
Successor to Morgan: Morgan and Rhinehart					Jan 20, 1860	Jan 20, 1880

LEASE NO. 11

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
William A. Bradley, Of Washington	Iron Foundry	N. E. Corner of Water and Fayette	100		July 1, 1851	Apr 1, 1880 Transferred Jun 30, 1859 to Elms and Bradley
Successor to Bradley: James Elms and William A. Bradley, Washington, Firm of Elms & Bradley	Flour		150	May 1, 1860, Renewed and increased to 150 inches	Apr 1, 1860	Apr 1, 1880 Mill burned 1879 This firm failed Dec 31, 1880

LEASE NO. 12

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
William C. Duvall	Cracker Bakery until 1857, when remodeled into flour mill	N. Side of Water Street, between Market and Frederick; near Frederick			About 1857	Apr 1, 1860 Renewed to Davidson, 1860
Successor to Duvall: John Davidson, Georgetown	Flour and grist	"The Model Mill"	200	May 1, 1860, renewed	Apr 1, 1860	Apr 1, 1880, Transferred to Tenney and Son, 1872
Successor of John Davidson: William H. Tenney and Son	Flour and grist		200	Transferred Renewed Apr 14, 1887	Jan 12, 1872 Apr 1, 1880	Apr 1, 1880 Apr 1, 1900

LEASE NO. 13

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
William H. Edes	Flour	70 Water Street	50	May 1, 1860, Permission from Nov 10, 1859 to transfer 50 inches from Little Falls	Apr 1, 1860	Apr 1, 1880 Transferred to Gartrell and Cissell, 1863
Successor to Edes: Cartwell and Cissell	Flour	Cherry Street near Potomac Street	50	Transferred Renewed	Jan 1, 1863 Apr 1, 1880	Apr 1, 1880 1900

LEASE NO. 14

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
George Hill Jr., Washington	Paper, "Potomac Paper Mill"	N.E. Corner of Water and Potomac Streets. A warehouse until 1864	200 <u>200</u> 400 417	Jan 21, 1864 200 additional inches granted Jan 1, 1863 by decision of U.S. Supreme Court Order of Feb. 1863 Increased to total of 417 square inches	Jul 1, 1864	July 21, 1884 Firm failed Jan 1, 1885

LEASE NO. 15

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
D. L. Shoemaker	Flour	Water, corner of High	96		1867	1880

LEASE NO. 16¹

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
Beall and Shoemaker	Flour	73 Water Street	125		1872	1880

¹ Young, *Antebellum Commerce of Old Georgetown*, 200-204

APPENDIX B

WATER POWER LEASES FOR MILLS ON THE C&O CANAL
BETWEEN GEORGETOWN AND LITTLE FALLS: 1840-1900

LEASE NO. 1

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease.	Effective Date	Date of Expiration
Farmers and Merchants Bank of Georgetown	Flour and grist	At "Old Locks", 2½ miles west of Georgetown	120 Perpetual grant by C&O Co. for cleaning old canal	Soon after Sep 11, 1839	Apr 1, 1840	Apr 1, 1860 Assigned by Feb 27 1881 to Edes
Successor of Farmers and Merchants Bank: William A. Edes	Flour and grist		120 <u>50</u> 170	Abandoned by Feb 27, 1851 after Edes purchased the mill from the bank	Feb 22, 1851 Lease increased 50 inches	Apr 1, 1880
Successor to Edes: David L. Shoemaker, Georgetown, Firm of D. L. Shoemaker and Brother	Flour and grist	"The Lock Mill"	200	May 1, 1860	Apr 1, 1860	Apr 1, 1880
Successor to D. L. Shoemaker and Brother: David F. Robinson, Georgetown	Flour and Grist		200	Mar 1, 1880	Apr 1, 1880	Apr 1, 1900

LEASE NO. 2

Lessee	Type of Mill	Location	Sq. in. of Water leased	Actual date of lease	Effective Date	Date of Expiration
James H. Mason, Executer of Gen. John Mason, De- ceased	Iron Foundry	One half mile west of George-town	100	Apr 20, 1854	Feb 1, 1840	Apr 1, 1880
Successor to Ma- son: David L. Shoemaker and Francis D. Shoe- maker, Corporation	Flour and grist	Foundry site “Foundry Mill”	100	May 1, 1860	Feb 1, 1860	Feb 1, 1880, transferred to Peall and Shoemaker, 1877
Successor to D. L. Shoemaker and Brother: 1. Peall and Shoe- maker 2. David F. Robin- son	Flour and grist	Foundry site Foundry site	100	Transferred Sep 22, 1880	Jan 1, 1877 Feb 1, 1880	Feb 1, 1880 Feb 1, 1900 ²

	Firm	Location	Tenure
1.	M. L. Williams	Market Space at the canal	1862–1864
2.	E. S. Barrett	Congress Street near the canal	1862–1864
3.	Dickson and King	Corner of Greene and Water Streets	1862–1879
4.	Charles Myers	42 Water Street	1862–1864
5.	H. Barron and Son	49 Greene Street	1862–1866
6.	James A. Donnelly	105 Water Street	1863–1865
7.	J. C. Hieston and Company And Hayfield and Hieston	Corner of Jefferson Street and the canal And corner of Greene St. and the canal	1863–1886
8.	William R. Snow and Co.	79 Water and 107 Water St.	1864–1867 ³

LEGEND Symbols [MAP FROM YOUNG]

Location of former streets, bridges and structures

Location of former railways, chutes and wharves for unloading and shipping coal

Towpath, 1831–1858

Towpath, 1855–1884

Mills Using Water Power

1. Flour and cotton, 1833–1866
2. Use Unidentified, 1840
3. Bark and flour, 1840–1882

² Young, *Antebellum Commerce of Old Georgetown*, 205–207³ Young, *Antebellum Commerce of Old Georgetown*, 25.

4. Bakery and flour, 1840–1900
5. Flour, 1841–1901
6. Use unidentified, 1843–1848
7. Saw, iron foundry and grist, 1844–1880
8. Flour, 1847–1900
9. Tannery, location unidentified, 1848–1849
10. Use unidentified, 1849–1880
11. Iron foundry and flour, 1831–1880
12. Bakery and flour, 1857–1880
13. –13A. Flour, 1880–1900
14. Paper, 1884–1885
15. Flour, 1887–1880
16. Flour, 1872–1880

Coal Wharves Using Water Power

- a. “Upper Coal Wharf”, 1806–1880
- b. “Ray’s Docks”, 1858–1880
- c. W. A. Bradley, 1859–1860

Coal Wharves Not Using Water Power

- a. American Coal Company, location unidentified, 1857–1880
- b. James R. Wilson, 1857–1887
- c. Morgan and Rhinehart, 1857–1867
- d. Allen H. Sherman, 1857–1867
- e. Aetna and Midland Coal Companies, 1858–1861
- f. John F. Agnew, 1854–1886
- g. Consolidation Coal Company, 1834–1880
- h. New Hope Mine, 1866
- i. Cumberland Coal and Iron Co., 1867–1873
- j. Hampshire and Baltimore Coal Co., location unidentified, 1869–1873
- k. Henry C. Winship, 1872–1875
- l. Merodith, Gilmore & Co., 1875–1886

Key to Georgetown Street Names in the Appendices

Old	Modern
Greene	29
Washington	30
Jefferson	Jefferson
Congress	31
High	Wisconsin Avenue
Cherry	Grace
Potomac	Potomac (partially closed)
Market	33 (partially closed)
Frederick	34 (partially closed)
Fayette	35 (partially closed)
Lingan	36 (partially closed)
Water	K ⁴

⁴ Map, Legend, and Key from Young, *Antebellum Commerce of Old Georgetown*,

APPENDIX C

WAREHOUSES ALONG THE C&O CANAL: 1850-1890

LOGWALL OR WIDEWATER AREA (LOCKS NOS. 14-15)

In August 1861 John Pettibone was granted permission to build icehouses on the berm side of the canal near the Logwall just off the property of the company. The purpose of the structures was to provide facilities for the transportation of ice down the waterway to Georgetown. Nearly a year later in August 1862, the canal board authorized President Alfred Spates to execute an agreement with Baylis Kidder, granting them the privilege to cut ice in the Logwall vicinity for a 10-year period at an annual rental of \$50.⁵

LOCK NO. 22

A list of the canal company's improved and unimproved real estate holdings along the waterway in 1890 indicates that three warehouses were standing near the lock at that time. The list provides the following information on the structures:

Warehouse of W. L. Thrasher—lease expires 1897—\$5 rent per annum.

Warehouse of Upton Darby and Co.—rent unknown.

Warehouse of George Pennifield—carried away by 1889 flood—lease expires 1897—
\$36 rent per annum⁶

LOCK NO. 24

At least two warehouses were built in the vicinity of Lock No. 24 in the early 1870's. On October 1871, the canal company granted a lease to John Darby and Son for "as much land as may be necessary to erect a warehouse on (the) berm side of (the) canal at Mouth of Seneca." The following year on March 5 the company directors approved a fifteen-year rent-free lease to James H. Gassaway, American Dawson, Samuel Dyson and others for "the right and privilege to erect a warehouse near the Mouth of Seneca." The structure was to be used for the purpose of "Freighting grain" from that point.⁷

The list of the canal company's improved real estate holdings in 1890 indicates that two storehouses or granaries were located near Lock No. 24. One was leased to William A. West for \$36 per year, while the other tenant was listed as unknown. The West lease was to expire in 1893.⁸

⁵ *Proceedings of the President and Board of Directors*, K, 257, 270.

⁶ *Real Estate, improved and unimproved. From the Records in Canal Co.'s office at Hagerstown and Information Obtained Orally from other Reliable sources*, 1890, Receivership Papers, Washington County Courthouse, Hagerstown, Maryland. The Thrasher warehouse was built apparently sometime in 1883, because an application by the Thrasher brothers to build a warehouse near Lock No. 22 was made in June of that year. *Proceedings of the President and Board of Directors*, N, 218.

⁷ *Proceedings of the President and Board of Directors*, M, 5.

⁸ *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

LOCK NO. 25

Canal company records indicate that a warehouse was being operated by James C. Young in 1859. There is no readily available information as to the dates of construction and early tenants of the warehouse.⁹

On October 5, 1861, the canal board approved the following resolution:

That B. R. Poole be permitted to build a warehouse on the land of the Company at Lock 25, under the direction of the supervisor, on the usual terms of such grants and paying therefore an annual rent of \$12 provided, that the company shall be exempt from any claim for damages, arising from any source.¹⁰

Nearly three years later on July 28, 1864, Charles F. Elgin requested permission to build a warehouse at Edwards Ferry for shipping granite. Although it is difficult to prove, this request may have been the warehouse used by the Potomac Red Sand Stone Company for which the canal company was receiving \$625 in rent per year in 1890.¹¹

According to a statement in the Montgomery County Circuit Court on May 28, 1872, there existed at Edwards Ferry a warehouse:

partly built on the Canal Company's property by Geo(rge) W. Spates, and that a carpenter's shop belonging to the Canal Company stands nearby, where a lot of ground belonging to Spates is used for storing lumber. The agreement allows Spates to let (the) warehouse stand for ten years and Spates agrees to allow (the) Canal Co. to continue to use Spates' land for (the) Carpenter Shop.¹²

Aside from the aforementioned Potomac Red Sand Stone Company's operations, the list of the canal company's real estate holdings in 1890 indicates that a granary warehouse was located on the berm side of the canal near Lock No. 25. Its annual rental was unknown, and its tenants were not given.¹³

LOCK NO. 26

Sometime during 1864 Daniel S. White built and occupied a warehouse on the berm of the canal just above the lock and adjacent to the road leading to the ferry landing (then known as Conrad's Ferry). The two-story warehouse was 70 feet long paralleling the canal and 23 feet in width. There were chutes on the canal side through which the grain was poured into canal barges. White paid \$36 a year for the lease of the warehouse, but by 1890 the lessee and rental fees were listed as unknown. The structure was razed by the National Park Service in 1962, but the foundation, built of Seneca red sandstone, remains to indicate its location.¹⁴

⁹ *Proceedings of the President and Board of Directors*, K, 87, 97.

¹⁰ *Ibid.*, K, 222.

¹¹ *Ibid.*, K, 393, and *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

¹² Land Records, Liber., 52, EBP 10-p. 4 -5, Montgomery County Circuit Court, Clerk's Office, Rockville, Md.

¹³ *Real Estate, Improved and Unimproved*, 1890, Receivership Papers

¹⁴ Miele, *Physical History*, 119; John F. Luzader, *Historic Structures Survey Report, Warehouse-Granary White's Ferry* (NPS MSS., 1962), 1-3; and *Proceedings of the President and Board of Directors*, K, 410. See 264-265 for drawings describing the operation of this structure.

MOUTH OF MONOCACY, NOLAND'S FERRY, POINT OF ROCKS

In November 1865 Otho W. Trundle was granted permission to build warehouses at the basin at the mouth of the Monocacy River, Noland's ferry and Point of Rocks. The warehouses were all to be built under the direction of the Superintendent of the Monocacy Division. The other stipulations in the agreement were: (a) the annual rental for each building would be \$36; (b) the buildings should not be placed so as to interfere with the navigation of the waterway; and (c) no liquor was to be sold on any of the premises.¹⁵

LOCK NO. 28

The real estate list of 1890 refers to a warehouse near Lock No. 28. It was leased to J. G. Waters at \$36 per year. No other information has been found relative to this structure.¹⁶

LOCK NO. 29

On March 24, 1864, the board of directors granted permission to George P. Remberg to construct a "warehouse on the lands of the Company on the berm side of the Canal near Lock No. 29." In 1890 the tenants and annual rental for the warehouse were listed as unknown.¹⁷

LOCK NO. 42

A canal company document in 1877 indicates that Charles Dellinger had leased a stone storehouse and a wood hay shed near Lock No. 42 for an undetermined period. The storehouse, which was used for the storage and shipment of "grain, corn and store goods", fronted on the berm side of the lock and was 30 feet wide and 20 feet long. The hay shed adjoined the storehouse and was 30 feet wide and 18 feet back. In 1877 Charles Dellinger died and his son Daniel took over the lease. In 1890 he was still leasing the "storehouse and granary" for an annual rent of \$36.¹⁸

MERCERSVILLE

A warehouse and loading dock, Known as Harris' Warehouse and later as Boyer's Warehouse, stood at Mercersville about 1 ½ miles above Lock No. 40 during the operation of the canal. The remains of the dock on the berm side of the canal are all that remain of this site, now known as Taylor's Landing.¹⁹

WILLIAMSPORT

There were at least three warehouses along the canal in Williamsport during the operating years of the waterway. Near Lock No. 44 were two warehouses leased to F. H. Darby and Sons and Charles Embrey and Sons. Both firms were involved in the coal and grain trade. On the basin just east of Aqueduct No. 5 was the warehouse operated by Victor Cushwa for his profitable coal and

¹⁵ *Proceedings of the President and Board of Directors*, K, 458-459.

¹⁶ *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

¹⁷ *Proceedings of the President and Board of Directors*, K, 374, and *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

¹⁸ Miele, *Physical History*, 121.

¹⁹ Dellinger to Gorman, May 1, 1877, Ltrs. Recd., C & O Co. and *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

grain transportation business. Although Cushwa had established his concern prior to the 1870's, he signed a 50-year lease for his warehouse in 1879 at an annual rental of \$100 for the first five years and \$120 thereafter.

GUARD LOCK NO. 5

In 1890 a warehouse was operated by Abram Roth near the guard lock. The date of construction and other information relative to the warehouse is not available.²⁰

LOCKS NOS. 47-50 (FOUR LOCKS)

The board granted permission to Denton Jacques on April 19, 1863, to lease company land near Lock No. 49 for the purpose of building warehouses. He was given a 10-year lease to a plot of ground 100 by 125 feet on the berm side and a plot 10 by 15 feet wide on the towpath side. The rental fee was set at \$10 per year. At the end of the lease he was to be given an additional 10-year lease at an undetermined rent, provided none of the structures would interfere with the free use of the canal and that no liquor would be sold on the property.

On June 1, 1866, William J. Hassett was authorized to build a warehouse and establish a coal yard on the canal berm at Lock No. 50. The warehouse and coal yard, which he was to rent at \$36 per year, were to be constructed under the direction of the engineer and general superintendent of the canal.

In 1890 there were two warehouses listed on canal property at Four Locks. A store, warehouse and hay shed were operated by Snyder and Fennser, and a warehouse near Charles' Mill on the canal berm was rented to the operator of the mill.²¹

MCCOY'S FERRY

In 1890 the company records listed a warehouse as being operated by Frank Winter on the berm side of the canal just above McCoy's Ferry.²²

HANCOCK

Just above Lock No. 52 in Hancock were located the Cohills Sumac Mills. This manufacturing concern, for which construction data is unavailable, consisted of several warehouses, a flour mill and store rooms. In 1890 the operation was listed as being leased to S. Rhinehart, who was paying an annual rent of \$100 for water power.²³

LOCK NO. 67

In 1890 a store and warehouse at the lock were listed as being rented to M. H. Russell for \$36 per year, the lease to expire in 1898. No other information relative to the construction of these buildings is available.²⁴

²⁰ *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

²¹ *Ibid.*, and *Proceedings of the President and Board of Directors*, K, 327, 494..

²² *Real Estate, Improved and Unimproved*, 1890, Receivership Papers.

²³ *Ibid.*

²⁴ *Ibid.*

LOCK NO. 70

Near Lock No. 70 were a warehouse, storehouse and icehouse according to the 1890 company list. No other information is available on these structures.²⁵

LOCK NO. 71

Near Lock No. 71 was a warehouse which according the 1890 company list was unoccupied. No other information is available on this structure.²⁶

²⁵ *Ibid.*

²⁶ *Ibid.*

APPENDIX D

COAL YARDS AND WHARVES USING WATER POWER
 FROM THE CHESAPEAKE AND OHIO CANAL
 TO UNLOAD AND SHIP COAL: 1856–1880²⁷

Lessee	Location	Water used	Actual date of grant	Effective Date	Date of Expiration
Swanton Coal and Iron Company	East of the Alexandria Aqueduct, at the S.E. corner of Water and Lingen Streets in the river front	Water supplied gratis to unload canal boats if quantity did not exceed that required to lock boat into river and back to canal	Oct. 12, 1855	Spring, 1836	March, 1858 Acquired by Borden Mining Company, 1858
Successor to the Swanton Company: Borden Mining Co. John R. Masters, Agent Beginning in 1872	Same as Swanton Company known as the "Upper Coal Wharf"	Same as Swanton Company until 1873, when annual rental changed		Mar 1853	Free grant to 1873 Rental to 1880
Longcoming Coal and Transportation Co., Washington, Alexander Ray, Agent, Georgetown. The MD and New Central Coal Companies were also shipping over Ray's Docks by 1869, and S.P.S. Hutson by 1870. Central transferred to Agnew in 1876.	Immediately west of Market Street, extending to river front wharf near the S. W. corner of Water and Market Streets. Known as "Ray's Docks" and "Lower Coal Wharf"	Same as in Grant A until 1873, when annual rental charged	Aug 5, 1855	Fall, 1858	Free grant to 1873 Rental to 1880
William A. Bradley	N.W. corner of Water and Fayette Streets, extending southward to river-front wharf near S.E. corner of Water and Fayette Streets	Same as in Grant A, until 1860		June 7, 1859	1860

²⁷ Young, *Antebellum Commerce of Old Georgetown*, 208–212.

APPENDIX E

**LIST OF COAL YARDS AND WHARVES IN GEORGETOWN
SHIPPING COAL WITHOUT THE
USE OF WATER POWER: 1856–1880²⁸**

Lessee	Location	Effective Date	Date of Expiration
American Coal Company		Aug 18, 1857	1880
James R. Wilson	Western end of Rock Creek Mole, adjoining Georgetown	Soon after Sep 3, 1857	Sep, 1867
Morgan and Rhinehart	On berm of the Rock Creek Basin at Georgetown	Sep 7, 1857	June, 1867
Allen M. Sherman	S.E. end of Rock Creek Mole, adjoining Georgetown	Oct. 1, 1857	Oct 1, 1867
Aetna Coal Company and Midland Coal Company, James R. Wilson, Agent, Georgetown	Between Market and Frederick Streets, extending southward to riverfront wharf between the same streets	Soon after Jun 30, 1858	1861
John P. Agnew, from 1876, agent of the New Central Coal Company	Foot of Frederick Street on the riverfront	1864	Through 1866
Consolidation Coal Company, Henry I. Weld, agent	On Linthicum's Wharf at the foot of Market Street on the riverfront	Nov 10, 1884	Through 1880
New Hope Mine J.H.T. McPherson, agent	Foot of Market Street on the riverfront	1866	1868
Cumberland Coal and Iron Company	Near and east of the Alexandria Aqueduct, on the riverfront between Lingan and Fayette Streets	1867	1878
Hampshire and Baltimore Coal Company		1869	Through 1878
Henry C. Winship	At the S.E. corner of the intersection of Market Street with the canal	1872	1875
Meredith Gilmor and Company	Foot of 30 Street on the river-front	1875	1886

²⁸ Young, *Antebellum Commerce of Old Georgetown*, 203–204.

APPENDIX F

THE CHIEF RETAIL COAL DEALERS NEAR THE CHESAPEAKE AND OHIO CANAL IN GEORGETOWN: 1860–1880²⁹

1	M. L. Williams	Market Space at the Canal	1862–1964
2	E. B. Barrett	Congress St. near the canal	1862–1864
3	Dickson and King	Corner of Greene and Water Sts.	1862–1879
4	Charles Myers	41 Water St.	1862–1864
5	H Barron and Son	49 Greene St.	1862–1866
6	James A. Donnelly	105 Water St.	1863–1865
7	J. C. Hieston & Co. and Mayfield & Hieston	Corner of Jefferston St. and the canal; and corner of Greene St. and the canal	1863–1886
8	William R. Snow & Co.	79 Water St. and 107 Water St.	1864–1867

MILLS USING WATER POWER

1. Flour and cotton, 1839–1900
2. Use unidentified, 1840
3. Bark and flour, 1840–1882
4. Bakery and flour, 1840–1900
5. Flour, 1841–1901
6. Use unidentified, 1843–1848
7. Saw, iron foundry, and grist, 1844–1880
8. Flour, 1847–1900
9. Tannery, location unidentified, 1848–1849
10. Use unidentified, 1849–1880
11. Iron foundry and flour, 1857–1900
12. Bakery and flour, 1857–1900
13. –13A. Flour, 1860–1900
14. Paper, 1864–1885
15. Flour, 1867–1880
16. Flour, 1872–1880

COAL WHARVES USING WATER POWER

- A. “Upper Coal Wharf,” 1856–1880
- B. “Ray’s Docks,” 1858–1880
- C. W. A. Bradley, 1859–1860

COAL WHARVES NOT USING WATER POWER

- A. American Coal Company, location unidentified, 1857–1880
- B. James B. Wilson, 1857–1867

²⁹ Source: Young, Rogers W. “The Chesapeake and Ohio Canal and the Antebellum Commerce of Old Georgetown.” Branch of Historic Sites. National Park Service, January 1940.

- C. Morgan and Rinehart, 1857–1867
- D. Allen M. Sherman, 157–1867
- E. Aetna and Midland Coal Companies, 1858–1861
- F. John P. Agnew, 1864–1886
- G. Consolidation Coal Company, 1864–1880
- H. New Hope Mine, 1866
- I. Cumberland Coal and Iron Co., 1887–1878
- J. Hampshire and Baltimore Coal Co., location unidentified, 1869–1878
- K. Henry C. Winship, 1872–1875
- L. Meredith, Gilmore & Co., 1875–1886

**HISTORIC RESOURCE STUDY
CHESAPEAKE & OHIO CANAL NHP**

11.

**THE C & O CANAL
DURING THE
CIVIL WAR:
1861–1865**

BY HARLAN D. UNRAU
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INTRODUCTION

A study of the Civil War experiences of the Chesapeake & Ohio Canal Company indicates a continuation of the ups and downs which had characterized the history of the waterway since the 1830s. The immediate effects were almost all negative. During the early war years the canal failed to share in the general prosperity which came to the northern states. One reason for its failure to secure much of the increased trade was that it was not a through route to the transmontane west, thereby limiting its portion of the heavy east-west traffic. Also, its geographical location was unfortunate because its entire line was on the border between the Union and the Confederacy, in the path of the contending armies. Consequently its trade was greatly reduced and its works alternately occupied and/or destroyed by the opposing forces. The resulting irregularity of its services as a carrier argued against large-scale use of it by the government or by private shippers. Furthermore the financial straits in which the company continually labored were a serious obstacle to the progress of the canal.

The only direct advantage derived from the war was the large demand for coal. Of the 15½ million tons of coal mined in the United States in 1860, nearly 60 percent was Pennsylvania anthracite while the remainder came from the Appalachian fields of Maryland and Virginia (including West Virginia). A specialized "super-coal," Maryland's product was particularly suited for New England textile mills and for steamship bunkering, and it had been used successfully for smelting iron. Thus, with Virginia coal no longer available to the northeastern market, Maryland's contribution became increasingly important to the Union cause. Yet the company had to wait over two years before its carrier was sufficiently clear of the battle zone to permit long periods of uninterrupted navigation.¹

In the long run, the war both encouraged and discouraged hopes for improved business prospects. The year 1863 marked a definite financial turning point in canal affairs as profits rose sharply to levels well above those of the prewar years. For a decade after the war, the net income of the company rose measurably with a regularity hitherto unknown to the disaster-ridden canal. It should be noted, however, that during the conflict a sizeable portion of the increased profits were the result of the neglect of the physical condition of the canal and of rising toll rates during the inflationary period, rather than by a marked increase in trade.

In other important ways, the war record was even less bright. Markets were affected differently. The lucrative flour trade, which was already passing to the Baltimore & Ohio in 1860, was finally and definitely lost as a result of the unreliability of canal navigation during the war. The coal trade, on the other hand, improved steadily toward the end of the conflict, and by 1865 it had become, for all practical purposes, the sole support of the canal company. Accounting for more than 90 percent of the trade on the waterway, the traffic in coal came to bear a great weight in canal affairs. When technological improvements later enabled the railroad to compete more successfully for the trade, the Allegany County coal companies forced toll reductions which deprived the canal of its profits before the trade was lost.

The physical condition of the waterway deteriorated greatly during the hostilities. Years passed before the masonry structures were properly repaired and the trunk restored to its original dimensions. As a result of the suspension of improvements, the canal was becoming outmoded and incapable of meeting the demands of an enlarged business. When improvements became unavoidable during the next fifteen years, the company found itself without the tremendous sums required. At best, the prosperity of the latter war years merely arrested the inevitable decline of

¹ Katherine A. Harvey, "The Civil War and the Maryland Coal Trade," *Maryland Historical Magazine*, LXII (December, 1967), 361-362.

the canal. At worst, the war indirectly hastened the end, while causing much incidental anguish to those who depended on it for a livelihood.²

² Walter S. Sanderlin, "The Vicissitudes of the Chesapeake & Ohio Canal During the Civil War," *Journal of Southern History*, XI (February, 1945), 51–53, 66–67.

I. THE CANAL PRIOR TO THE OUTBREAK OF WAR

The year 1860 had not been profitable for the Chesapeake & Ohio Canal Company. Political influence from the Maryland legislature had brought about the wholesale turnover of employees and the reorganization of the administration of the company in May and June.³ The canal had not been opened to navigation until mid-May. Business had then been brisk until November, when heavy rains over the Potomac Valley caused the rivers to rise rapidly. Dams Nos. 5 and 6 were injured, while considerable destruction was done to Guard Lock No. 4 and the towpath below Dam No. 4. The Marsh Run Culvert was washed out, several sections of the trunk were filled with silt and debris, and the walls of Lock No. 21 partially collapsed. The canal was shut down for three weeks while temporary repairs were made thus preventing the movement of coal from Cumberland to the District cities when such trade could be expected to be at its height. Income from the tolls which had totaled \$32,547.54 in October fell to \$15,951.47 for the final two months of the year, and the annual trade statistics showed a decline of more than 17,000 tons of coal from the 1859 totals.⁴

When the canal was drained for the winter in late December, more permanent repairs were made to restore the canal to its operating condition before the freshet. As a result of these efforts, company officials looked forward to a "prosperous boating season" in 1861 despite the looming clouds of war.⁵ Nevertheless, the approaching conflict was the cause of some anxiety and mixed emotions to the canal directorate as evidenced by the following communication from President Lawrence J. Brengle to Clerk Walter S. Ringgold on New Year's Day:

We are in great excitement here [company headquarters at Frederick] with regard to the National Crisis, and don't know what to do that will be of any advantage to arrest the difficulty. We are much divided in sentiment on the subject. I still hope there is conversation enough in the country yet to save it.⁶

Water was readmitted to the canal in the second week of March 1861, and during the following month there were heavy shipments of coal from the Allegany County mines. In March income from the tolls was \$16,768.25, while during the first ten days of April \$12,581.01 was collected.⁷

On April 12 torrential rains drenched the entire watershed of the Potomac Valley, causing a disaster that dashed the company's hopes of a profitable year.⁸ The Potomac continued to surge upward. Upon the portion of the canal, it reached a height only exceeded by the 1852 flood. Considerable destruction was caused to canal property as a result of "the unprotected condition of the embankments near the feeder at Dam No. 4." A number of washes and breaches occurred on the Cumberland, Hancock, Williamsport, and Antietam Divisions while damage to the Monocacy and Georgetown Divisions was less severe than had been feared.⁹

³ *Proceedings of the President and Board of Directors*, K, 183–183, 192–195.

⁴ *Thirty-Third Annual Report* (1861), C&O Co. pp.3, 8–9, 14, and Charleton to Board of Directors, November 7, 1860, Fitzpatrick to Ringgold, November 6, 1860, and Stake to Board of Directors, November 13, 1860, Ltrs. Recd., C&O Co.

⁵ Ringgold to Colston, December 15, 1860, Ltrs. Recd., C&O Co., *Thirty-Third Annual Report* (1861), 9–10, 14; and *Proceedings of the President and Board of Directors*, K, 240, 244.

⁶ Brengle to Ringgold, January 1, 1861, Ltrs. Recd., C&O Co.

⁷ *Thirty-Third Annual Report* (1861), 10, and *Thirty-Fourth Annual Report* (1862), C&O Co., 3, 9.

⁸ Carleton to Ringgold, April 13, 1861, Ltrs. Recd., C&O Co.

⁹ *Thirty-Third Annual Report* (1861), 10, and Washington *Evening Star*, April 15, 17, 1861

II. WAR COMES TO THE CANAL: 1861

As the repair crews prepared to restore the waterway, they were hindered by two factors—the desperate financial condition of the company and the withdrawal of Virginia from the Union on April 17, thus insuring that the Potomac Valley and the canal would feel the full impact of the grim struggle about to engulf the United States. Upon the adoption of the Secession Ordinance by the Virginia Convention, Confederate militia converged on Harpers Ferry, eager to seize the arms and machinery at the Unite States Armory and Arsenal. Unable to capture their objective before it was fired by the retreating Federal troops, the Rebel army used the area as a concentration point where untrained volunteers were organized into a fighting force by Colonel Thomas J. Jackson. Troops were sent across the Potomac into Maryland, occupying the strategic locations at Point of Rocks and Maryland Heights.¹⁰

Despite the presence of the Confederates around Point of Rocks and Harpers Ferry, progress in effecting repairs of the flood damage was reported by the division superintendents. Water was back in the entire line by May 14, but the activities of the Virginia militia around Harpers Ferry and Alexandria made the coal shippers hesitant to use the waterway until the military situation was clarified.¹¹ Although the canal records do not indicate how many boats were detained by the Rebels between Point of Rocks and Harpers Ferry, it was reported that a boat owned by Thomas McKaig had been held up at the latter town by a detachment of Confederate soldiers while its load of salt was removed.¹²

The coal operators were further alarmed by reports during the period of repairs that small bands of Confederate pickets were gathering near the Potomac Aqueduct. In an effort to drive the pickets away, small bodies of Federal troops commenced frequent forays across the Potomac at night in late April and early May. Finally on May 23 the United States Government occupied the aqueduct, and on the following day Union troops occupied the Virginia shore opposite Washington. As the towpath of the aqueduct proved to be inadequate for the military exigencies, it was later determined to shut the water off from the structure and convert its trunk into a double-track wagon road by overlaying the floor with 4 inch planks. By December 5, the bridge over the aqueduct was under construction, and on December 16, the water was drawn off to permit the erection of long wooden inclines on trestles to form connections with the roads on either side. A dam was placed across the Georgetown entrance of the aqueduct by December 23, thus closing the structure to the trade of the canal.¹³

By late spring the Cumberland coal trade had virtually been halted. On June 1, the Pottsville *Miners' Journal* announced that the trade "appears to be entirely suspended for the present by Railroad as well as Canal. The dislodgement of the Rebels from Harper's Ferry, which will soon take place, will re-open the trade by Railroad from Cumberland again, but not by Canal."

¹⁰ *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (Washington, 1880–1900), Series I, Vol. II, 809–810.

¹¹ Spates to Ringgold, May 6, 13, 1861, Ltrs. Recd., C&O Co., and *Thirty-Fourth Annual Report* (1862), 3.

¹² *Proceedings of the President and Board of Directors*, K, 290.

¹³ Washington *Evening Star*, May 2, 24, December 5, 16, 23, 1861; Maj. Gen. J. G. Barnard (Brevet), *A Report on the Defenses of Washington to the Chief of Engineers, U.S. Army* (Washington, 1871), 79–80. The long wooden incline on the Georgetown side of the aqueduct extended over the canal and connected present-day 36th Street with the abutment. Commission of Fine Arts and Historic American Buildings Survey, *Georgetown Architecture—The Waterfront* (Washington, 1968), 151. Prior to the construction of the bridge over the aqueduct, an alternative proposal of building a boat bridge was studied seriously. However, the idea was given up because of the depth and powerful currents of the river in the vicinity and the frequency of floods and icing.

Meanwhile the competing Pennsylvania Broad Top Coal was "coming into demand to supply its place."¹⁴

The annual meeting of the company stockholders was held at Frederick on June 4. The fears and uncertainties of the period were reported as follows:

The general condition of the canal for navigation at this time is believed to be better than it has been for some years past, and a fair business for the season could be done, but for the political agitations of the country, by which business has been prostrated, transportation rendered uncertain and precarious, and subject to frequent delays, if not seizures by the contending parties on the banks of the Potomac, and unless there be an early removal of the seat of war, it is feared that a general suspension of the transportation on the Canal, will occur.¹⁵

During the second week of June, Brigadier General Joseph E. Johnston, who had replaced Jackson as commander at Harpers Ferry in May, received news that a Union column under Major General George B. McClellan advancing eastward along the Baltimore & Ohio Railroad had occupied Cumberland on the 10th. Shortly thereafter, he learned from his scouts that Major General Robert Patterson, the federal commander of the recently-created Department of Pennsylvania with headquarters at Chambersburg, was closing in on Williamsport with 14,000 troops. Sensing that his position at Harpers Ferry was a trap for his command, Johnston on June 15 pulled troops out of that vicinity and fell back to Winchester.¹⁶

Before evacuating Harpers Ferry, Johnston had his demolition teams sabotage the canal. These groups wreaked considerable havoc on the waterway from Harpers Ferry to Dam No. 5. On the evening of June 8 word was received in Williamsport that some rebel soldiers were attempting to put "a blast into Dam No. 5, to blow it up." The Clearspring Guards proceeded to the dam and drove off the Virginians after a brief skirmish. Later in the night, the Confederates returned and planted a cannon to defend their men while at work on the dam. One blast was ignited which destroyed a small portion of one of the stone-filled cribs, but no serious damage took place. The next morning a small band of Unionists armed with Minnie muskets left Williamsport and aided the Clearspring Guards in repossessing the dam. During the following week, a series of skirmishes took place at the dam as each side attempted to drive the other out of the area.¹⁷

On June 13 canal president Alfred Spates reported that the canal was badly injured above Harpers Ferry. Gates at four of the locks were destroyed, and a number of boats had been burned. Based on the damage that he had seen, he complained that he felt "very sad at the destruction committed."¹⁸

The Washington *Evening Star* on June 14 reported that the Virginians were making a concerted effort to destroy Dam No. 4. According to the account, the rebels were

engaged every night, with dark lanterns, drilling holes in the solid rock on which Dam No. 4 rests, on the Virginia side, in order to blow up the same. Should they make successive heavy blasts the dam must give way. The work is superintended by Redmond Broun,

¹⁴ Pottsville *Miners' Journal*, June 1, 1861, quoted in Harvey, "Civil War and Maryland Coal Trade," p. 365.

¹⁵ *Thirty-Third Annual Report* (1861), 4.

¹⁶ Edwin C. Bearss, "War Comes to the Chesapeake & Ohio Canal," *West Virginia History*, XXIX (April 1968), 155-156. Patterson's troops occupied Williamsport but made no effort to cross the Potomac at that time.

¹⁷ *Washington Evening Star*, June 11, 14, 1861.

¹⁸ Spates to Ringgold, June 13, 1861, Ltrs. Recd., C&O Co.

an Irishman who superintended its construction. He has two sons among the Confederate troops.

Heavy firing was reported at the dam as a company of 45 Sharpshooters from Boonsboro had gone to assist the Sharpsburg Company in an attempt to drive the Confederates away. Already four Virginians had been wounded badly during the skirmishing.¹⁹

The presence of Southern troops on the Virginia side of the Potomac made it unsafe to attempt any repairs. What especially worried General Superintendent A.K. Stake was that it was difficult to secure planks to repair the stop lock at Dam No. 4. Unless this was done promptly, the canal below that point would be subjected to extensive damage by a freshet. The discouraged engineer reported to company officials on June 26 that

Nothing but soldiers, baggage, wagons, camps, guns, pistols and swords, meets our gaze here [Williamsport]. Wherever we go they have pretty nearly eaten up everything we have. I hope they will get away soon.²⁰

Because of the straightened finances of the canal company President Spates on July 1 urged Clerk Ringgold to see if he could collect in advance from the Georgetown millers \$1,000 of their water rents.²¹ Of this sum \$500 would be allocated for the repair of the stop lock at Dam No. 4. Once completed, this would enable the boatmen to bring down a number of stranded coal boats. The captains were reportedly willing to pay their tolls in cash on their arrival in Georgetown. Repairs to the canal in the Harpers Ferry area were progressing rapidly, but Dam No.1 was leaking so badly that it would take a good force ten days to tighten it.²²

While the company was attempting to collect advances from the Georgetown millers on their water rents, it received word from several enterprises that the war had forced them to cease operations. One such message came on July 9 from Williamson & Co. which had leased the Pioneer Cotton Factory in Georgetown on January 1, 1861. With the outbreak of hostilities in April, inflationary wages and expenses, the scarcity and high price of cotton, and a drastic reduction of sales even at prices below production costs had ruined the company's credit. As a result, the plant had been closed and all hands had been discharged. Until the conflict ended and the factory was back in operation, the company requested that it be relieved of its water rents.²³

A Cumberland minister also described the depressing effect of the outbreak of hostilities upon the interests of Western Maryland and his town. Among other observations, he wrote that

Her great thoroughfare, the Baltimore & Ohio Railroad, was interrupted and her Canal closed. Trade from Virginia was withdrawn. Every industry was stopped or curtailed; stores were closed and marked "for rent;" real estate sank rapidly in value. Merchants without customers slept at their counters, or sat at the doors of their places of business. Tradesmen and laborers, out of employment, lounged idly about the streets. The railroad workshops were silent and operations in the mining regions almost entirely ceased. Then commenced a deep, painful feeling of insecurity and an undefined dread of the horrors of war. Panic makers multiplied and infested society, startling rumors were constantly float-

¹⁹ Washington *Evening Star*, June 14, 1861.

²⁰ Stake to Spates, June 26, 1861, Ltrs. Recd., C&O Co.

²¹ In fiscal year 1861, the company had collected \$5,202.24 in water rents.

²² Spates to Ringgold, July 1, 1861, Ltrs. Recd., C&O Co.

²³ Williamson and Co. to President and Directors, June 20, 1861, Ltrs. Recd., C&O Co., and *Proceedings of the President and Board of Directors*, K, 254. Desperate for revenue, the canal company refused to grant the request of Williamson & Co. on July 9.

ing about of secret plots and dark conspiracies against the peace of the community and private individuals.²⁴

It was July 2 before the Union troops crossed the Potomac at Williamsport. In the campaign that ensued, Johnston, the Confederate commander, took his army eastward out of the Shenandoah Valley and combined with the force under Pierre G. T. Beauregard to maul the Federals in the war's first major battle at Manassas on July 21. During the maneuvering in the weeks before the battle, marauding bands of Confederates made several forays against the canal, one of which took place at Great Falls, Maryland, on July 7. In the day-long fire fight, the Confederates nearly succeeded in driving out the Eighth Battalion of the District of Columbia Volunteers that was protecting that strategic position.²⁵

Heavy rains at the beginning of July caused additional damage to the canal. Although Union advances in the Potomac Valley had compelled the Confederates to pull back from the river, the repair crews did not wish to take any chances. General Superintendent Stake complained that the Rebels seemed determined to oppose any navigation on the canal, and it was "impolitic if not dangerous to attempt repairs." Only those sections that could be attended to without risk would be pushed. Work was to be commenced on July 8, and Stake estimated that it would require eight to ten days to restore navigation. As the regular work crews that resided along the line of the canal had left, the company would be forced to transport men, supplies, and provisions into the areas needing repairs. Stake's fears that the canal would be subjected to damage by marauding soldiers as long as the Union and Confederate armies confronted each other in the Potomac Valley were heightened as he organized the work crews when he was warned of a threat by the Rebels to "blow down Dam No. 6." At the same time a Union officer warned that no repairs should be made to Dam No. 1. If the warning was not heeded, he would have his men tear down the dam. Almost daily roving Confederate bands were in the habit of shooting across the Potomac toward the canal at numerous points along the river.²⁶

Despite the hindrances to the work crews, all of the repairs on the canal were finished by July 20, the day before the Battle of First Manassas, except those at Edwards Ferry, a culvert three miles above Paw Paw Tunnel, and the Oldtown Deep Cut. While the last repairs were underway, General Robert Patterson dispatched a company of troops to Hancock to protect the waterway from Williamsport to Cumberland. The repairs at Edwards Ferry were completed soon thereafter, but it took an 80-man crew with 20 horses and carts some 25 days to restore navigation at the large breach near the aforementioned culvert and the heavy rock slide at the Oldtown Deep Cut. When an inspection of the repairs by President Spates revealed that the pool behind Dam No. 5 was so low that the canal could not be navigated, a crew was put to work tightening the dam. Finally on August 26 the canal was again navigable from Cumberland to Georgetown. To affect the repairs, Spates had been forced to borrow \$1,000 from the Merchant's Bank in Baltimore and \$1,000 from the Cumberland Bank of Allegany County.²⁷

With the canal again open for its entire length, trade improved rapidly led by the loaded coal barges that had been stranded below Dam No. 6. Tolls which had fallen to \$657.36 in May, \$206.27 in June and \$16.94 in July zoomed upward to \$2,444.07 in August and \$10,509.17 in September. During the three-week period after August 26, 10,628 tons of coal, in 96 boats, were

²⁴ Will H. Lowdermilk, *History of Cumberland* (Washington, 1878), 396–397.

²⁵ O. R., Series I, Vol. II, 123.

²⁶ Stakes to Spates, July 6, 1861, Ltrs. Recd., C&O Co.

²⁷ Spates to Ringgold, July 20, 24, August 1, 13, 25, 1861, Ltrs. Recd., C&O Co. General Superintendent Stake, frustrated by the effect of the war on the canal, resigned his position effective August 1. Ringgold to Stake, July 10, 1861, Ltrs. Recd., C&O Co.

shipped from Cumberland to the District cities.²⁸

The rise in trade was encouraged by several factors. First, to keep the Confederates from interfering with boating on the upper divisions of the canal, President Spates, who was a friend of one of the aides of General Robert E. Lee, made an agreement with them.²⁹ Second, President Abraham Lincoln on July 20 approved a communication from Secretary of War Simon Cameron to Representative Francis Thomas, a former president of the canal company in 1839-41, authorizing the organization of four regiments of loyal citizens

on both sides of the Potomac River from the Monocacy to the west boundary of Maryland, for the protection of the canal and of property and persons of loyal citizens.³⁰

Third, as the Potomac divided the territory held by the Union and Confederate forces in the weeks following the Battle of First Manassas, Federals reporting to Brigadier General Charles P. Stone watched the river from Great Falls to the Monocacy River, while units under General Banks held the line of the river from the Monocacy to Shepherdstown. By mid-August, Stone's main force was camped at Poolesville, while Edward's Ferry, Conrad's Ferry and Seneca were held by strong detachments and a string of pickets stretched down to Great Falls. With his division encamped near Hyattstown, Banks assigned the 2nd Massachusetts to occupy Harpers Ferry and hold the Virginia bridgehead, and posted the 13th Massachusetts at Sharpsburg, the 1st Maryland Infantry at Williamsport, the 28th New York at Berlin, and the 28th Pennsylvania at Point of Rocks. The primary mission of the Federal forces was to observe "the enemy across the Potomac and protect the Chesapeake & Ohio Canal.³¹

Fourth, heavy rains in early August caused the Potomac and its tributaries to swell. With the river at near flood stage, there was little immediate danger of a Confederate thrust into Maryland as the unseasonably high water level prevented fording of wagons and artillery.³²

As a result of these factors, canal traffic proceeded with little interruption until mid-October. To be sure there were several incidents along the canal during this period, but none had a serious affect on the operation of the waterway. On August 16 and several days following there were reports that a company of Confederates had shot at canal boats near Edwards and Conrad's Ferries from positions across the river. A canal boatman was mortally wounded by Rebel fire at Shepherdstown on September 9. During the skirmish at that town, the Federals destroyed the Potomac Mill which had passed into the ownership of Alexander R. Boteler, a former Congressman elected by the American Party from the Harper's Ferry District who was now a member of the Confederate Congress and a colonel on the staff of General Jackson.³³ The bridge across the Po-

²⁸ Carleton to Ringgold, September 14, 1861; Ltrs. Recd., C&O Co., and *Thirty-Fourth Annual Report* (1862), 9. In comparison, the toll collections for the same months in 1860 had been as follows: May—\$19,214.19; June—\$18,529.60; July—\$23,051.10; and August—\$28,005.02. *Thirty-Third Annual Report* (1861), C&O Co., 14.

²⁹ Spates to Ringgold, August 13, 1861, Ltrs. Recd., C&O Co. The terms of the agreement were never made public.

³⁰ O. R., Series III, Vol. I, 338–339, and Roy P. Basler, ed., *The Collected Works of Abraham Lincoln* (8 Vols., New Brunswick, 1953), IV, 455.

³¹ O. R., Series I, Vol. V, 560, 565, 567, 569, 574. One of the regiments from which picket details were sent to the Great Falls area was the 71st Pennsylvania. Most sources agree that members of this regiment, known informally as the "First California Regiment," were the first to discover free samples of gold near the falls during this period. For more information on this topic, see Appendix A. of this chapter.

³² *Ibid.*, 565, 573

³³ Ezra J. Warner and W. Buck Yearns, *Biographical Register of the Confederate Congress* (Baton Rouge, 1975), 25–26; *Hagerstown Mail*, January 18, 1867; and Misc. MSS., Alexander R. Boteler Papers, Duke

tomac was also wrecked by the Union troops in the hope that such an action would deprive the Rebels of easy access into Maryland.³⁴

Six days later, on September 15, a severe skirmish erupted at Harpers Ferry following sporadic clashes on the 13th and 14th between a strong Rebel force attempting to retake the town and northern troops under Colonel John W. Geary. Placing his left behind the railroad embankment southeast of the abutment of the burned Y-bridge and his right along the canal towpath near Lock No. 35, Geary drove the Confederates back in the direction of Bolivar Heights after a two-hour fire-fight.³⁵

The increase in canal trade and the apparent inability of the Confederates to mount an offensive across the Potomac into Maryland contributed to the optimism of businessmen along the canal. Hence several new enterprises were commenced along the waterway in early October. John Pettibone was granted permission to build ice houses on the berm of the canal near the "logwall" to facilitate the transportation of that item to Washington.³⁶ B. R. Poole was authorized to build a warehouse on the land of the canal company near Lock No. 25 for an annual rental fee of \$12.³⁷

Despite the trade increase, however, the company was forced to admit by October 1 that its means were inadequate to operate and maintain the canal properly. Accordingly, the board passed the following resolution:

Whereas on the 6th of Feby. last, the Board adopted a resolution "that the Company will continue to receive the Certificates of tolls in payment of tolls so far as their means and financial ability will admit, and Whereas, in consequence of suspension of business on the canal for some months past, owing in a great measure to the belligerent operations on the Potomac, the means of the Company are inadequate to the proper repair and maintenance of the Canal, therefore it is,

Resolved, that from and after this day, all tolls accruing on the Canal be required to be collected in cash, until otherwise ordered.³⁸

There was a marked increase in military activity along the canal in mid-October. Union soldiers under Colonel Geary crossed the Potomac, pushed through Harpers Ferry, and occupied Bolivar heights. Once a picket line was formed, fatigue parties began removing and boating to the Maryland side hundreds of bushels of wheat stored in the flour mill on Virginian Island. By the evening of the 15th, the Union men had completed their task, but before they could be withdrawn across the Potomac the next morning, a strong force of Confederates led by Lieutenant Colonel Turner Ashby advanced and drove in Geary's picket line. A sharp fight ensued in which the Yankees defeated Ashby's troops, and under the cover of darkness on the night of October 16 the Federals evacuated their bridgehead and recrossed the Potomac.³⁹

The bloody Battle of Ball's Bluff occurred on October 21. A 1,700-man brigade led by

University Library, Durham, North Carolina. Later in 1864, Federal troops crossed the river at Boteler's Ford and marched toward the Shenandoah Valley to destroy its usefulness for the Confederacy. On the way, Boteler's home ("Fountain Rock") near Shepherdstown was burned. *Shepherdstown Register*, July 16 and August 21, 1924, in Boteler Papers.

³⁴ John F. Luzader, *Historic Sites: Shepherdstown, West Virginia* (NPS MSS., 1962), 21

³⁵ O. R., Series I, Vol. V, 197–199, 569, 594.

³⁶ *Proceedings of the President and Board of Directors*, K, 257. Later on July 29, 1862, the firm of Bayliss and Kidder was granted the privilege of cutting ice on the "logwall" for ten years at an annual rent of \$50., *Ibid.*, K, 270.

³⁷ *Ibid.*, K, 222.

³⁸ *Ibid.*, K, 258

³⁹ O. R., Series I, Vol. V, 239–342.

President Lincoln's close friend, Colonel Edward Baker, had crossed the Potomac at Harrison's Island using a number of flatboats, one of which had been moored in the canal about one mile away. After occupying Ball's Bluff as part of a general reconnaissance campaign ordered from Washington, the Federals were assailed by a 1,700-man Confederate force under Brigadier General Nathan G. Evans and routed. The withdrawal became a disaster as the Union troops fell back to the crest of the bluff and then attempted to escape. Baker was killed along with 49 of his men, 158 were injured, and 714 missing, many of whom drowned, compared to only 155 casualties for the Confederates.⁴⁰

Two days after the debacle at Ball's Bluff, on October 23, a small pitched battle broke out at the mouth of South Branch. The fight was triggered when the Confederates attempted to blow up the abutment of the South Branch Bridge. Some six companies of Federal troops, whose strength was diminished by a raging epidemic of measles, were required to drive the Rebels off and restore order.⁴¹

The Union success at South Branch forestalled the intent of the Confederates to destroy Dam No. 6. Earlier on October 20, Colonel Angus W. McDonald, headquartered at Romney, had issued the following order:

Col. E. H. McDonald will take all the mounted men of his command, except those upon scout service, and with them, together with Captain Sheets' Co. of the Cavalry Regt., repair to the mouth of Big Capon, in the County of Morgan, and then proceed to destroy Dam No. 6, by digging around the abutment a sufficient ditch on the Va. shore to drain the Dam, and by such other means as may suggest to him as best to effect the destruction, confining his operations to the Va. shore. The necessary implements will be provided to accompany you. Having effected all you can towards the destruction of the Dam you will proceed to destroy the water stations of the B & Ohio R.R. as far up the South Branch, or as many as you can convenient with a speedy return to this point with your command. Arriving there you will proceed to destroy the abutments of the Bridge thereof. On your arrival at Dam No. 6, and every 12 hours after, you will dispatch a courier to report your progress to Head Quarters [at Romney, Virginia]. Upon your return you will report in writing your action under this order.⁴²

The repercussions resulting from the disaster at Ball's Bluff sapped the enthusiasm of Generals Banks and Stone for operations designed to wrestle the initiative from the Confederates. In early November there would be elections in Maryland, and the States Rights Party, composed of pro-Southern elements, was making a bid to gain control of the Border State. A responsive War Department ordered the Union commanders to give furloughs to soldiers of the Maryland Volunteers so that they might return home and add their weight to the polls. General Banks was also directed to send detachments of men to various points to protect Union voters from intimidation by "disunionists" and to arrest any such persons who had just returned from Virginia. If necessary he was authorized to suspend the writ of *habeas corpus*. As expected under such circumstances, the generally peaceful election swept Augustus W. Bradford, a conservative Unionist, to victory as Governor by a margin of 57,502 to 26,070 over his States Rights opponent, Benjamin C. Howard.

⁴⁰ E. B. Long, *The Civil War Day by Day: An Almanac, 1861–1865* (Garden City, 1971), 129–130, and *O. R.*, Series I, Vol. V, 327–329.

⁴¹ Smith to Ringgold, October 23, 1861, Ltrs. Recd., C&O Co.

⁴² This copy of the orders was found in an anonymous pamphlet, *To the People of Maryland: The Canal and its Management Vindicated* (n. d.) Rare Book Division, Library of Congress. The orders were taken from the personal baggage of Col. Angus W. McDonald by Brigadier General B. F. Kelley at the capture of Romney.

and Unionists gained healthy majorities of 68 to 6 and 13 to 8 in the House of Delegates and the Senate respectively.⁴³

The setback suffered by the troops led by Colonel Ashby at Bolivar Heights on October 16 had far-reaching repercussions. Influential citizens of Jefferson County, Virginia, led by Representative Alexander R. Boteler of Shepherdstown, began to urge President Jefferson Davis to appoint a battle-tested commander to lead the recruits in that area. On October 24, Boteler warned Davis that the "enemy along the canal has been re-enforced." The previous day he had watched a Union fatigue party construct a raft at Dam No. 4, and he had seen a number of loaded coal barges pass down the waterway.⁴⁴ The barrage of letters caused Davis to act, and on November 5 he issued orders for Major General Thomas J. Jackson, who had acquired the nickname "Stonewall" at the Battle of First Manassas, to proceed to Winchester and assume command of the newly-created Valley District.⁴⁵

Meanwhile, trade on the canal had continued to be heavy during the month of October. Up until the 26th, 154 boats carrying 27,313 tons of coal had cleared the Cumberland mole. Of these, 78 had discharged their cargoes at points above Georgetown, principally Sandy Hook just below Harpers Ferry where a large Federal supply depot was located.⁴⁶

Heavy downpours in early November caused the Potomac to crest at the highest levels since the devastating flood in 1852. However, little serious damage was inflicted on the canal except at the Harpers Ferry bridge abutment, where part of the stone wall on the towpath side had been washed into the canal and a portion of the high wall on the berm side had been undermined, and at the Round Top Cement Mill above Hancock, where a major break had occurred. On the Monocacy Division repairs were slowed, when the Union troops took possession of the company scow, wheelbarrows, and tools. The icebreaker had also been appropriated by the Federals to transport artillery and had been damaged. In making the repairs, money was the biggest problem because the superintendents, in most cases, were out of cash, credit, and provisions. Workers on the Antietam Division, complaining that they had not been paid for over a month, walked off their jobs in early December.⁴⁷

Despite some of the military's actions that tended to hinder the repairs, Union soldiers in the vicinity of the canal also aided in its restoration. On November 10, Brigadier General Stone informed President Spates that during the flood he had sent large parties of his men to protect the canal. Without such efforts, much of the embankment would have been "permanently injured." The troops

carefully watched the towpath, and as soon as the water receded from it, commenced refacing. 90 men being employed in my division the first day & more since.

Three breaches were promptly stopped. One large one near Seneca, in front of Genl. Banks' Division was repaired, but gave way again & is, I believe, made whole even more, by men from Genl. Banks' division.⁴⁸

⁴³ Richard Walsh and William Lloyd Fox, eds., *Maryland: A History, 1632–1974* (Baltimore, 1974), 354–355; *Secret Correspondence Illustrating the Condition of Affairs in Maryland* (Baltimore, 1863), 30–39; O.R., Series I, Vol. V, 628–29, 641, 645–647, 651–652; and *Hagerstown Herald & Torch*, November 13, 1861.

⁴⁴ O.R., Series I, Vol. V, 898–899, 919.

⁴⁵ O.R., Series I, Vol. V, 938.

⁴⁶ Carleton to Ringgold, October 26, 1861, Ltrs. Recd., C&O Co.

⁴⁷ Murray to Ringgold, November 5, 14, 1861, Byrns to Spates, November 6, 1861, Jones to Ringgold, November 11, 1861, and Boatman to Ringgold, December 2, 1861, Ltrs. Recd., C&O Co.

⁴⁸ Stone to Spates, November 10, 1861, Alfred Spates Papers, Alderman Library, University of Virginia, Charlottesville.

Although the repairs to the canal were underway, the Confederates were convinced that the waterway would not be reopened until spring. The Winchester *Republican* expressed these sentiments when it reported on November 15 that:

The Chesapeake & Ohio Canal has been damaged by the recent freshet as to render it entirely worthless for purposes of navigation, nor could it be repaired, were every facility afforded, before spring. We conversed with a gentleman who walked across the dry bed of the canal at Hancock a few days since. He reports that it is broken at many points, and that the Yankees had abandoned all hope of having it in running order again this winter. The Canal closed, and the Potomac blockaded, the infidels will have to rely exclusively upon the Washington & Baltimore Rail Road for fuel and supplies of all kinds.⁴⁹

As a result of the flood and the lengthy period of repairs, revenue from tolls fell from \$17,793.22 in October to \$3,245.56 in November. Liquid assets of the canal company were non-existent. In an effort to secure funds, the collectors at Georgetown and Cumberland were instructed not to pass any boats whose owners refused to pay their tolls in cash.⁵⁰ The financial condition of the company was so poor by late November that it was forced to suspend payment of interest due on its debts to various banks.⁵¹

On November 24 just as the entire length of the canal was about to be opened for navigation, President Spates sent a letter to Major General George B. McClellan, calling attention to the strategic value of the canal to the Northern armies and asking for increased protection of the waterway by Federal troops. The communication read as follows:

It is the desire and intention of the Directors of the canal to keep it open for navigation as long as the season will admit and if the water is moderate in its temperature this may be done with no large expenditure throughout the entire season. It will offer great facilities to this community in the transportation of coal from the mining regions of Alleghany and may also be of material advantage to the U. State in facilitating the transportation of supplies for the army not only through the course of the canal, but in connection with the Baltimore & Ohio Railroad from the west to Cumberland and thence by canal to Washington. To accomplish this it is desirable and essential that proper protection of the works and facilities for transportation should be given by the United States. Hitherto for some months past detention has arisen by the military restrictions which have been imposed upon the boats navigating the canal;—They have not been allowed to run during the night and have been unnecessarily detained during the day so as to prolong their voyages nearly double the usual time required. It is in this view that I take the liberty of addressing you and earnestly request that you will give such orders as you may deem requisite to give ample protection to the canal and proper facilities for transportation upon it, and also that property of the company consisting of boats, houses & c. which are essential to the proper conduct of the canal and which have been used by the military authorities be directed to be returned to the officers of the company.⁵²

⁴⁹ Winchester *Republican*, November 15, 1861, in Boteler Papers.

⁵⁰ Spates to Ringgold, November 3, 1861, Ltrs. Recd., C&O Co. On November 12, the canal board relaxed its policy to permit the "several Mining Companies and others engaged in the transportation of coal...at established rates" to pay their tolls at the end of the month. *Proceedings of the President and Board of Directors*, K, 262.

⁵¹ Reed to Ringgold, November 26, 1861, Ltrs. Recd., C&O Co.

⁵² Spates to McClellan, November 24, 1861, Ltrs. Sent, C&O Co. The following day Spates wrote a similar letter to Quartermaster General Montgomery C. Meigs. Spates to Meigs, November 25, 1861, Ltrs Sent,

By the beginning of December, the canal was again open to navigation for its entire length. During the first two weeks of the month, 87 boats carrying 7,613 tons of coal, 633 tons of lumber, cord wood, and cooperage, and 89 tons of hay and oats left Cumberland. More than one-half of the boats were slated to discharge their cargoes at the Sandy Hook government supply depot.⁵³

Meanwhile General Stonewall Jackson, while waiting for reinforcements to move against the Union force at Romney, had determined to impede reconstruction of the Baltimore & Ohio Railroad and to stop boating on the canal. When the Confederates had reoccupied the line of the railroad from Harpers Ferry to Cumberland after the Battle of First Manassas, the federal government had imposed heavy duty on the waterway as a line of supply. At Cumberland the Baltimore & Ohio relayed to the canal large quantities of supplies for the Army of the Potomac and Washington's civilian population.⁵⁴ Since October numerous reports had been reaching Richmond that troops and munitions were being sent up the canal for use in probable thrusts against the valuable agricultural region in the Shenandoah Valley. The failure of his generals to destroy the Baltimore & Ohio Railroad and the Chesapeake & Ohio Canal had caused Jefferson Davis to complain that such a default had left the foe "in possession of great advantages for that operation."⁵⁵ In early December word reached Jackson that large numbers of empty coal boats were passing up the canal to Cumberland, and he recognized that the reopened canal would be "of great service to the Federal Army at Washington." Since the Cumberland coal fields were an important source of that product and the farm lands served by the canal supplied flour, wheat, and corn, Jackson decided "to cut off western supplies by breaking Dam No. 5."⁵⁶

Sending his militia troops in a feint toward Williamsport, Jackson marched his main force to the vicinity of Dam No. 5 on December 7. That afternoon a Rebel force of about 400 infantry and 200 horse soldiers commanded by Captain William McLaughlin appeared on the Virginia shore of the dam. Throwing their three 10-pounder Parrots, one 12-pounder Sawyer, and two 6-pounder smoothbores into battery, the cannoneers of the Rockbridge Virginia Artillery "commenced throwing shells and shot at the dam and houses on the Maryland shore." A barn was set on fire and all the houses within range, including the lock-tender's residence, were riddled, but the projectiles failed to do any damage to the crib and rubble dam. The bombardment continued until dusk. The only Union troops at the dam were a company of the 13th Massachusetts, which had been assigned to guard the river from Harpers Ferry to Oldtown, on picket and several companies of the 12th Indiana, which had been posted at Sharpsburg, Williamsport and Dams Nos. 4 and 5 since October 13. As all the Federals were armed with short-range smoothbore muskets, their weapons were useless against the Rebel gunners. That night Colonel Samuel H. Leonard of the 13th Massachusetts dispatched a canal boat to Cumberland, and the craft quickly returned with Company G, 13th Massachusetts, which was armed with long-ranged Enfield rifle-muskets. The

C&O Co.

⁵³ Carleton to Ringgold, December 9, 13, 1861, Ltrs. Recd., C&O CO.

⁵⁴ Festus P. Summers, *The Baltimore & Ohio Railroad in the Civil War* (New York, 1939), 100–109.

⁵⁵ O. R., Series I, Vol. V, 946

⁵⁶ O. R., Series I, Vol. V, 390, and Walter S. Sanderlin, *The Great National Project: A History of the Chesapeake & Ohio Canal* (Baltimore, 1946), 207. Originally, Jackson had considered destroying both Dams Nos. 4 and 5, but he opted against the former because the new masonry Dam No. 4, considered by some to be "the strongest of its kind in the country," had been completed in the spring of 1861. On the other hand, construction of a new masonry Dam No. 5 to replace the old leaking log-cribbed, rock-filled structure was proceeding more slowly and was still only partially completed. Aside from the fact that Dam No. 5 was more vulnerable, it also had the advantage of being farther removed from the Frederick region, where General Banks had camped his division in early December. John Miele, "The Chesapeake & Ohio Canal: A Physical History" (NPS MSS., 1964), 46–47, and O. R., Series I, Vol. V, 676–677.

newcomers were posted in the woods on the Maryland shore and ordered not to fire until given word.⁵⁷

Early on the morning of December 8, the Confederate artillerists reopened their concentrated fire on the dam. Emboldened by the slight resistance of the previous day, they advanced their gun to the brink of the river and fearlessly exposed their position. Following the order of Colonel Leonard, the newly-arrived men from Company G, 13th Massachusetts, opened fire from their hiding places along the river. Within a few minutes, the Rebel artillerists abandoned their guns and fled to less dangerous ground along with the cavalry and infantry. Without sufficient numbers of men and a supporting battery, Leonard was unable to cross the Potomac to take possession of the fieldpieces, thus enabling the Confederates to withdraw their six guns at nightfall.⁵⁸

On December 9 the Confederates opened a scathing small-arms fire on the Federals. Covered by the Southern fire, a Confederate fatigue party worked its way down to the southern abutment of the dam. Using entrenching tools, they began digging a ditch around the end of the abutment, into which they hoped to divert sufficient water from the Potomac to erode the ground from the abutment and eventually cause it to topple and the dam with it. The Confederates worked until dark, protected by the stone abutment from the fire of the Union sharpshooters. By the time that they were recalled, water was pouring through the ditch.⁵⁹

Satisfied that his efforts to destroy Dam No. 5 were successful, McLaughlin recalled his troops and returned to Winchester. However, the level of the Potomac was falling rapidly, and the water passing through the Confederate ditch soon diminished to a trickle and then ceased. On the 14th, Jackson reported:

I have made two attempts to prevent navigation on the canal, but have not thus far succeeded. The only good results that I am aware of having been effected was the capture of 1 captain, 2 corporals, and 5 privates of the Twelfth Indiana Regiment, and damaging this end of Dam No. 5, and killed 1 of the enemy. On our part 2 men are supposed to be mortally wounded. The injury done to Dam No. 5 is not sufficient to admit the passage of water on the Virginia side.⁶⁰

Two days after the action at Dam No. 5, on December 11, Union Brigadier General Stone assumed “military supervision of the Chesapeake & Ohio Canal” in compliance with Special Order No. 322, issued at the command of Major General McClellan:

The Secretary of War directs that the Chesapeake & Ohio Canal be placed under the military supervision of Brigadier General C. P. Stone, Volunteer Service. The immediate superintendence of the canal will be under the President of the Company, Alfred Spates, Esq. The officers of the canal, serving under him shall be in all respects, satisfactory to the military authority. The receipts of the canal will be applied to meet current expenditure on account of its operations, and any excess or deficit in the income will be placed to the account of the Canal Company. The President of the Canal Company will furnish General Stone with an account current of the monetary affairs of the company, monthly. General Stone will give military protection to the canal property and such aid as is con-

⁵⁷ Washington *Evening Star*, December 10, 1861; Charles E. Davis, *Three Years in the Army: The Story of the Thirteenth Massachusetts Volunteers from July 16, 1861 to August 1, 1864* (Boston, 1864), 16–17; Ted Perry, ed., *Civil War Letters of Edwin Rice* (Boston, 1975), 18, 20; Baltimore *Evening Sun*, August 11, 1937; and Harold R. Mannakee, *Maryland in the Civil War* (Baltimore, 1961), 64–64.

⁵⁸ Washington *Evening Star*, December 10, 1861.

⁵⁹ *Ibid.*

⁶⁰ O. R., Series I, Vol. V, 365.

sistent with the good of the service in keeping it in repair. Should the execution of this last provision extend beyond the limits of General Stone's command, his requisition on the proper commanders will be promptly complied with.⁶¹

Accordingly, all officers commanding pickets between Great Falls and the Monocacy River were ordered (and all officers of pickets along the rest of the canal were requested) to "give all aid and assistance in their power, consistent with the good of the service, to the Canal Co. authorities in the preservation & improvement of the canal."⁶²

Before making another attempt to destroy Dam No. 5, Jackson circulated reports that he planned to attack the Federal forces at Romney with some 7,000 men. While the Union commanders prepared to head off such an attack, Jackson completed preparations to oversee personally the destruction of Dam No. 5. By the time that he left Winchester on December 16 at the head of the Stonewall Brigade, his scouts had collected and secreted a number of small boats to be used in crossing the Potomac. After sending a brigade of militia to feign an attack against Williamsport via Falling Waters, the Stonewall Brigade, which had been reinforced by Colonel Ashby's cavalry south of Martinsburg, took position on the hills overlooking Dam No. 5 at dusk on the 17th. That night a fatigue party led by Captain R. T. Colston of Company E, 2nd Virginia, who was familiar with the area and the structure of the dam, moved out. Colston and his men crept half way across the dam and slid down into the icy water to begin hacking away at the dam's cribs. Their muffled blows went undetected by Union sentinels on the north bank until nearly daybreak. At the first alarm, the Federals opened fire on the workmen, but they soon saw that the Rebels had piled up stone in the middle of the dam to form a crude but effective breast-work.⁶³

As additional protection for Colston's fatigue party, Jackson had placed two guns on a hill commanding the dam. The cannoneers promptly put their pieces into action, shelling a brick house on the Maryland side of the river from which Yankee sharpshooters were harassing the workmen. The Federals soon scattered, but a section of the 1st Pennsylvania Artillery quickly galloped into view, threw their two 10-pounder Parrots into battery, and forced the Rebel artillerists to desert their guns. The deadly Union artillery and rifle fire compelled Colton's fatigue party to drop their tools and take cover because the demolition team in going to and from the barricade across the dam had to run a deadly gauntlet.⁶⁴

General Banks took steps to cope with this threat to the canal. As there was the possibility that the Confederate forces which had occupied Falling Waters might move against Dam No. 4, he directed Colonel John R. Kenly of the 1st Maryland Infantry, camped four miles west of Frederick, to be prepared to march his regiment to either Dam No. 4 or No. 5 "as necessity may require or as the movements of the enemy may dictate." When it became obvious that Dam No. 5 was the Rebels' objective, Kenly pushed his column forward and established his command post at

⁶¹ Special Order No. 322, December 6, 1861, in Spates Papers.

⁶² General Order No. 33, December 12, 1861, in Spates Papers. Stone immediately requested from Spates information on four topics of vital concern to the operation of the waterway, (1) a list of canal company employees including their duties, stations, and salaries; (2) an estimate of the number and type of ice boats needed on each division to keep the canal open during the winter; (3) an estimate of the number of animals needed for full-scale operations; and (4) a list of stations where boats should be able to stop and discharge cargo in order to eliminate the current system that placed restrictions on the movement of goods on the waterway. Stone to Spates, December 11, 1861, in Spates Papers. Spates was given a pass so that he could travel on the towpath at any time with a servant and two horses. Pass issued by A. P. Banks, December 16, 1861, in Spates Papers.

⁶³ O. R., Series I, Vol. V, 395–396, 688, and Bearss, "War Comes to the Canal," pp170–171.

⁶⁴ O. R., Series I, Vol. V, 390, 397, and Washington *Evening Star*, December 21, 1861.

Four Locks on the 19th⁶⁵

At the same time, Banks deployed four infantry regiments with eight field pieces along the Potomac between Shepherdstown and Hancock. Two regiments, the 5th Connecticut and the 29th Pennsylvania, and a section of guns from Battery F, 4th U. S. Artillery, were called up from the reserve to reinforce the units charged with the defense of the canal.⁶⁶

Colston's fatigue party, reinforced by companies from the 27th and 33rd Virginia, continued their demolition work in the bitterly cold water during the nights of the 18th and 19th. Union artillery and sharpshooters shelled the Virginia shore and the dam, scattering the fatigue party and killing and maiming several of them. Nevertheless, they continued their efforts, under the cover of Rebel gunners, until mid-afternoon of the 20th. By that time, a breach had been opened that Jackson believed to be of sufficient size to cripple the canal, and the Confederates pulled back.⁶⁷

After the retirement of Jackson's troops, Union patrols crossed the Potomac and visited the site of the Confederate encampment. There they picked up numerous blankets and entrenching tools and burned a mill that the foe had been using. Upon inspecting the dam, Colonel Leonard found that damage was not extensive, and working parties were organized to assist canal hands with its repair.⁶⁸

On December 21 canal navigation was resumed both above and below Dam No. 5. During the day, two guns were rushed to Little Georgetown, where some Rebel infantry appeared on the south bank of the Potomac. Although the Confederates withdrew after a few shots, the troops guarding Dam No. 4 were reinforced with the 29th Pennsylvania and the 5th Connecticut was ordered to Hancock.⁶⁹

The canal was still open New Year's Day 1862, and, according to President Spates, the "waterway, despite the recent activities of the Confederates is in good order and things look very well all over the line."⁷⁰ Despite the Confederate attempts to destroy Dam No. 5, the heavy December traffic in coal caused the toll collections to rise sharply to \$6,345.14 for the month.⁷¹

Nevertheless, 1861 had been a disastrous year for the canal company as well as for the Western Maryland coal industry. The trade statistics on the waterway for the year compared with those of 1860 demonstrate the drastic decline in traffic and revenue:

	TOTAL TONNAGE	COAL TONNAGE	TOLLS
1860	344,532	283,249	\$182,343.86
1861	144,814	119,893	70,566.99

The statistics of the aggregate Cumberland coal trade for the year also reveal the dependence of the Allegany County interests on the through transportation of the canal and the Baltimore &

⁶⁵ O. R., Series I, Vol. V, 397, and Bearss, "War Comes to the Canal," p. 172. Some of Kenly's men occupied Fort Frederick and "knocked a hole in the wall through which to point a gun for taking pot shots at the Confederates across the Potomac." John Thomas Scharff, *History of Western Maryland* (2 vols., Philadelphia, 1882) Vol. I, 217.

⁶⁶ O. R., Series I, Vol. V, 368, and Washington *Evening Star*, December 21, 1861.

⁶⁷ O. R., Series I, Vol. V, 390, and Bearss, "War Comes to the Canal," p. 174.

⁶⁸ O. R., Series I, Vol. V, 390, 398, and Washington *Evening Star*, December 21, 1861.

⁶⁹ O. R., Series I, Vol. V, 399–400, and Bearss, "War Comes to the Canal." P. 175. Apparently, Jackson, who was back in Winchester by the 21st, was deceived by the over-optimistic stories of his subordinates, because he reported on Christmas Eve, "There is reason to believe that the recent breaks in Dam No. 5 will destroy any vestige of hope that might have been entertained of supplying Washington with Cumberland coal by the Chesapeake & Ohio Canal." O. R., Series I, Vol. V, 390

⁷⁰ Spates to Ringgold, January 1, 1862, Ltrs. Recd., C&O Co.

⁷¹ *Thirty-Fourth Annual Report* (1862), 9.

Ohio Railroad. The shipments of the various coal companies fell from 789,000 tons in 1860, which was an all-time high up to that date, to slightly less than 270,000 tons in 1861, an amount almost exactly that shipped in 1851 when the trade was just opening on the newly-completed canal.⁷²

At the annual meeting of the stockholders in June 1862, President Alfred Spates commented on the dismal ramifications of the canal operations during 1861:

The last annual report [June 1861] anticipated to some extent the unfavorable operations of the Canal for the past year; owing to the belligerent movements then in progress on the Potomac, and although the direct damages done to the Canal and its works by the military were not very great, yet, its business results were even more disastrous than was expected. This was caused by the damages arising from the proximity of the contending forces on the river, the restrictions imposed upon the transportation by the military authorities, and the frequent detentions of the boats, by which the time usually required to complete their voyages was nearly doubled.

The Canal was opened for navigation about the 15th of March, 1861, with an active business for one month, which was then interrupted by a freshet in the river, causing considerable injury to the Canal and the suspension of navigation for a month, which time was required to complete the repairs. When navigation was again restored, active hostilities had commenced, and there was comparatively no business on the Canal before September. Between this [date] and ... December, there were occasional interruptions by breaches in the Canal.

The diminished revenues of the Company have prevented any improvements on the Canal, and indeed have been altogether insufficient to keep it in proper condition, and this has resulted in an increased indebtedness for services and materials, in addition to the numerous and large claims of that class previously existing.

It will be observed that the expenses for ordinary repairs, &c., have been unusually small, but this has been the consequence of the limited means of the Company, which were not adequate to the repairs actually required for the security of the Canal, and the proper maintenance of the navigation.

As a result of the depredations of nature and man, 1861 was the worst year financially that the company had experienced since 1848, two years before the canal was completed to Cumberland.⁷³

⁷² Harvey, "Civil War and the Maryland Coal Trade," 364–365.

⁷³ *Thirty-Fourth Annual Report* (1862), 3–5.

III. THE CANAL REACHES ITS LOWEST EBB: 1862

Under the direction of the military authorities, canal company officials attempted to keep the waterway open during the winter of 1861–1862 for the first time since the waterway had been completed to Cumberland in 1850. Icebreakers were employed in the fight to keep the canal operating as the military was anxious to transport supplies to its troops preparatory to the coming spring offensive and the canal officials were eager to make up for the loss of trade during the previous year. A cold snap in early January closed the canal, but the weather soon moderated and by the 15th it was again open and ice-free as far west as Hancock. Despite the resumption of trade, income from tolls fell to \$954.19 for the month.⁷⁴

At the beginning of the new year, General Jackson made a final effort to interrupt traffic on the canal. Reports reaching Jackson led him to conclude that the reinforced Federals might converge on Martinsburg and then push on toward his base at Winchester. To counter such a movement, the Confederates took the field on January 1 and marched from Winchester toward the Potomac. After a long march through bitter winter weather, the Rebels occupied Bath on the 4th after the Federal garrison was scattered and fled across the Potomac in boats.⁷⁵ Here Jackson was reinforced by Colonel Ashby, who had been engaged since December 30 in a vain effort to reopen the breach at Dam No. 5 by placing a rifled gun on the Virginia side and firing shots at it.⁷⁶ On the morning of the 5th, the Confederates advanced on Hancock, but after a two-day bombardment of the town, Jackson ordered his gunners to cease fire and withdraw to Romney when it was learned that more Union troops were being sent into the fray. Cold weather now put a stop to military operations along the canal.⁷⁷

After the canal navigation was closed, Major General Banks ordered the canal officials to make repairs on the waterway with the aid of his men. If the division superintendents did not commence the work immediately, the military would oversee the work entirely. The government would pay the repair crews so that the men would not have to be concerned about getting paid.⁷⁸

Political influence brought about a wholesale turnover of employees during the period from February to April 1862. Alfred Spates was reelected president, but the administration of the line was reorganized. Six new superintendencies were formed and new collectors and lock tenders were appointed. Although these appointments were the last during the war years, some of the new officials soon proved to be less than efficient employees.⁷⁹

In late February Major General Nathaniel P. Banks' advance guard crossed the Potomac and occupied Harpers Ferry. A pontoon bridge could keep this force supplied, but the Federals' plan called for large-scale operations and the restoration of through traffic on the Baltimore and Ohio Railroad. Among the proposed plans for such an undertaking was that advanced by President Lincoln to bridge the river at Sandy Hook with canal boats, while a Philadelphia engineering firm rebuilt the railroad bridge at Harpers Ferry. A number of canal boats on the Monocacy and Antietam Divisions were appropriated by the military for the project. However when McClellan visited the area on February 27, he determined that the banks were too steep for the projected boat bridge, and plans for it were scrapped.⁸⁰

⁷⁴ Carleton to Spates, January 8, 1862, and Spates to Ringgold, January 15, 1862, Ltrs. Recd., C&O Co.; *Thirty-Fourth Annual Report* (1862), 9; *Thirty-Fifth Annual Report* (1863), C&O Co., 8; and *Washington National Intelligencer*, March 10, 1862.

⁷⁵ O. R., Series I, Vol. V, 391–392.

⁷⁶ *Washington Evening Star*, January 1, 1862.

⁷⁷ O. R., Series I, Vol. V, 391–392, and *Washington Evening Star*, January 7, 1862.

⁷⁸ Leonard to Link, February 6, 1862, and Banks to Spates, March 6, 1862, in Spates Papers.

⁷⁹ *Proceedings of the President and Board of Directors*, K, 272–274, 276–277, 282.

⁸⁰ O. R., Series I, Vol. V, 49, 730, and Lincoln to McClellan, February 8, 1862, in Basler, *Collected Works*

With the arrival of warmer weather, the canal, whose westernmost sections had been closed during much of February, was again opened to navigation from Cumberland to Georgetown by March 1. Coal stockpiles in the District cities had been depleted during the severe winter, and would have to be replenished from the Allegany County coal mines. Since it was assumed that the powerful army organized by McClellan would seize and hold the initiative during the coming year, canal officials were optimistic that the waterway would escape being a scene of active military operations and would consequently have a banner year in trade.⁸¹

Reports submitted by the division superintendents in early March indicated that the canal was generally in good navigable condition. However, the company's carpenter and blacksmith shops on the Monocacy Division had been robbed and a number of tools were missing. One of the company scows had been located, but it had been seized by the army and was being used as a ferry on the river.⁸² On the Cumberland Division it was reported that the towpath and berm banks along some sections had been injured by government wagons passing over them. The railings on the aqueducts had been removed to allow military vehicles to pass.⁸³

The naval engagement at Hampton Roads, Virginia, in which the Confederate ironclad *Merrimac* destroyed two Union warships—*Cumberland* and *Congress*—on March 8, had repercussions which affected the canal. News of this defeat frightened and panicked officials in Washington. President Lincoln was so distressed

that he could not deliberate or be satisfied with the opinions of non-professional men, but ordered his carriage and drove to the navy yard to see and consult with Admiral [John] Dahlgren [the officer in charge of the Washington Navy Yard] and other naval officers, who might be there.⁸⁴

Perhaps the most gloomy assessment of the battle was rendered by Secretary of War Edwin M. Stanton:

The Merrimac...would destroy every vessel in the service, could lay every city on the coast under contribution, could take Fortress Monroe; McClellan's mistaken purpose to advance by the Peninsula must be abandoned, and Burnside would inevitably be captured. Likely the first movement of the Merrimac would be to come up the Potomac and disperse Congress, destroy the Capitol and public buildings; or she might go to New York or Boston and destroy those cities, or levy from them sufficient to carry on the war.⁸⁵

Knowing that the Union ironclad *Monitor* was en route to Hampton Roads from New York Harbor, Secretary of the Navy Gideon Welles attempted to reassure them that the *Merrimac*, if she tried to ascend the Potomac, could not pass Kettle Bottom Shoals. Rejecting the optimistic report by Welles, Stanton, with Lincoln's concurrence ordered on March 9 Quartermaster General Montgomery C. Meigs and Admiral Dahlgren to seize 50 or 60 canal boats and other craft. The barges would be filled with stone and gravel, moved down the river, and sunk at Kettle Bottom Shoals or at some other point in the channel to prevent the *Merrimac* from ascending the Poto-

⁸¹ *of Lincoln*, V, 130

⁸² Edwin C. Bearss, "1862 Brings Hard Times To the Chesapeake & Ohio Canal," *West Virginia History*, XXX (January, 1969), 436

⁸³ George W. Spates to Alfred Spates, March 8, 1862, Ltrs. Recd., C&O Co.

⁸⁴ Lowe to Ringgold, March 8, 1862, Ltrs. Recd., C&O Co.

⁸⁵ *Diary of Gideon Wells* (3 vols., Boston, 1911), Vol. I, 61–62

⁸⁵ *Ibid.*, 63.

mac. That afternoon all unemployed boats on the Georgetown Division were taken to the Washington Navy Yard, where a large fatigue party began loading them with gravel. By nightfall, eight were ready to cast off, and a similar number would be ready to sail by dawn.⁸⁶

On the evening of March 10, news reached Washington that in a battle on the previous day; the *Monitor* had forced the *Merrimac* to retire to the Confederate navy yard at Norfolk. On the basis of this report, Welles succeeded in getting Lincoln to forbid the sinking of any of the 60 canal boats that had been loaded with gravel and sent down to Kettle Bottom Shoals as long as the *Monitor* could keep the *Merrimac* from entering the Potomac.⁸⁷

Meanwhile, Commander Wyman had been making soundings on the river, and he concluded that the best points to obstruct the Potomac were at Smith's Point and Mattawoman Muds. Accordingly, orders were issued to move the gravel-loaded canal boats to Smith's Point.⁸⁸

After the crisis atmosphere subsided, the military continued to rush boats down the canal. On March 10, some 103 canal barges, most of which were empty, passed through Williamsport under the charge of army officers. Of this fleet of boats, 37 had come from Cumberland and the rest from unknown points.⁸⁹ None of them had any way bills.

Several weeks later, President Lincoln, Secretary Stanton, and other officials passed down the Potomac on board a steamer for Fortress Monroe. When the long line of canal boats moored near the Maryland shore attracted attention, the President jokingly exclaimed:

that is Stanton's navy. That is the fleet concerning which he and Mr. Welles became so excited in my room. Welles was incensed and opposed the scheme, and it has proved that Neptune was right. Stanton's navy is as useless as the paps of a man to a suckling child.

They may be some show to amuse the child, but they are good for nothing for service.⁹⁰

After detaining the 103 boats for more than a month, the Federals found a need for about 50 of them in late April. Commander Wyman had ascended the Rappahannock to Fredericksburg with his squadron, while at the same time Major General Irwin McDowell had commenced an overland advance from Aquia Creek to Fredericksburg. As his troops pushed forward, they repaired the Rappahannock, Fredericksburg, and Potomac Railroad, which had been wrecked by the withdrawing Rebels. Forty canal boats were convoyed down the Potomac and up the Rappahannock to Fredericksburg to bridge the latter river.⁹¹

By late March 1862 the tide of the war had turned momentarily in favor of the Union. Banks' troops had occupied Winchester, and Stonewall Jackson's columns had been forced to withdraw up the Shenandoah Valley to Mount Jackson. McClellan's Army of the Potomac had occupied the fortified Confederate camp at Centreville and then marched to Alexandria from where it had embarked aboard ship for Fortress Monroe. These Union gains in the eastern theater of the war removed the canal for the time being from the sphere of active military operations.⁹²

With the threat of invasion lifted, canal company official hoped that full-scale navigation could be resumed. The Cumberland coal companies alerted their people to be ready to resume shipments. Although there was a shortage of boats as a result of the military's actions, it was forecast that with "uninterrupted navigation" there would be enough vessels to earn a large revenue. To take advantage of the trade opportunities, appeals were sent to McClellan and other mili-

⁸⁶ Bearss, "1862 Brings Hard Times," 437-438.

⁸⁷ *Diary of Gideon Welles*, Vol. I, 63-66.

⁸⁸ Bearss, "1862 Brings Hard Times," 438.

⁸⁹ Wolfe to Ringgold, March 10, 1862, Ltrs. Recd., C & O Co.

⁹⁰ *Diary of Gideon Welles*, Vol. I, 67.

⁹¹ O. R. , Series I, Vol. XII, 3, 94, 98, 105, 121, 207.

⁹² Bearss, "1862 Brings Hard Times," 438-439.

tary and civil officials, asking for the prompt release of the seized boats that were so vital to the economic life of the canal.⁹³

The issue of disloyalty and labor difficulties with the boatmen soon arose to cloud the prospects for a profitable trade. As Maryland was a Border State with a strong pro-Southern element, Unionist authorities suspected Democrats of being disloyal and throughout the war many such individuals lost their jobs or were imprisoned. One of the canal company's most capable division superintendents, B. B. Boatman of the Antietam Division, was fired for disloyalty, because at the previous November election he had refused to write his name on the back of his ballot. On April 4 he sent a letter to the canal board protesting the charges against him:

I have been identified in interest with it, since it has been a canal, now removed, from my position, I suppose, because of my attention to the business relating to it upon the day of election, instead of subjecting myself to the contemptible position of a serf, by unauthorized and unconstitutional act, of requiring each voter to endorse his name on the back of the ticket. I have never concealed my political views, been an open and avowed Democrat, and now, even in this day of bickering and clamor, challenge any man, to allege one charge against me, in word or act disloyal. [I] have spent much of my time laboring on this work, not receiving my monthly dues, always hoping in its prosperity, and that finally [I] would receive the compensation.⁹⁴

Although no charges of disloyalty were proven against Boatman, the canal company refused to reinstate him.

The company representatives in Cumberland were distressed by rumors that the boatmen were planning to strike. While the coal companies were willing to pay higher rates, the demands of the boatmen, which ranged between \$1.50 and \$1.75 a mile per ton, were such that they would cause the price of Cumberland coal to rise to a point where it would be unable to compete with coal from the Pennsylvania mines. Already, the Pennsylvania Railroad Company had reduced its hauling charge on Broad Top Coal by 30 cents a ton per mile.⁹⁵

The dispute with the boatmen was resolved on April 11, when the canal directors agreed to permit an increase in the toll on coal from 1/4 to 5/16 of a cent per ton mile.⁹⁶ As soon as this compromise was reached, a large number of boats were loaded with coal to begin the spring coal navigation. However, the small number of boats available for the canal trade was alarming. As many of the canal boats that had been taken over by the government were lying idle at Georgetown, President Spates prevailed upon Governor Augustus W. Bradford of Maryland to intervene on the company's behalf and get the Federal authorities to release the desperately-needed barges. The situation was urgent since the lack of boats would soon ruin the canal company and the laborers of Allegany County, some of whom had been out of work for nearly a year. In the meantime the Pennsylvania interests had moved "heaven and earth to maintain themselves on the ground they were enabled to occupy" by the disasters that had befallen the canal. It was reported that the Pennsylvania Railroad Company was prepared to reduce its coal-hauling charges still further to exclude the waterway "from market another year when an attempt to regain it on our part will be almost impossible." As a result, the "very existence of the canal" was "trembling in the

⁹³ Ringgold to Greene, March 24, 1862, Ltrs. Sent, C & O Co., and Greene to Ringgold, April 1, 1862, Ltrs. Recd., C & O Co.

⁹⁴ Boatman to Board of Directors, April 4, 1862, Ltrs. Recd., C&O Co. Boatman claimed the canal company owed him \$1,000 in back pay and that he would be willing to settle for two-thirds of the amount if he received the rest immediately.

⁹⁵ Greene to Ringgold, April 7, 1862, ltrs. Recd., C & O Co.

⁹⁶ *Thirty-Fifth Annual Report* (1863), 5

balance." It would be impossible for the boatmen to replace in 1862 the 100 boats held by the government.⁹⁷

On April 15 Governor Bradford contacted Quartermaster General Montgomery C. Meigs on behalf of the canal company. That same day Meigs sent a memorandum to President Lincoln recommending that the War Department

take immediately all necessary measures to have all boats, scows, and other property used in repairing and navigating the Canal restored to their rightful owners. If boats have been used for the uses of the Army or Navy and cannot be restored, they are forthwith to be paid for, so that trade on the Canal may be revived.

Lincoln submitted the memorandum to Secretary Stanton with the following comment:

I do not sign the within, because I do not know but there is a good reason, known to the Secretary of War, why the course indicated should not be taken. But if no such reason is known, I think that course should be adopted.⁹⁸

The communication by Governor Bradford was effective, because on April 16 Stanton promised canal officials that he would issue an order within 24 hours for the restoration of the government-held canal boats to the company. The company was to receive compensation for those boats that had been destroyed or injured. Some 36 boats had been sent down the Potomac to the Rappahannock and they would be returned as soon as possible. Six or eight of the boats had been sunk with stone, and if practicable, they were to be raised from the river bottom and returned to the company. Twenty-four boats at Georgetown were to be released at once. About 40 boats which had been released earlier and which had been taken again by Army officers for the transportation of government stores from various points on the canal to Alexandria were to be unloaded and released immediately. There was also hope for the restoration of the Potomac Aqueduct to canal purposes.⁹⁹

Secretary Stanton saw that a General Order was issued by Lorenzo Thomas, Adjutant General of the United States. General Order No. 44 dated April 21, 1862, directed that

All the lock-houses, boats, scows and other property belonging to the Chesapeake and Ohio Canal Company, on the line of said canal, now held, used or occupied by the United States officers or troops, will be forthwith given up and restored to the President of the said company. All officers of the Army will respect Alfred Spates, Esq., as President of the said company, and are hereby prohibited from interfering in any manner with him in the management of the canal; but are directed to give such aid and assistance as is consistent with the good of the service, in keeping it in repair, and removing all restrictions which have been imposed upon the boats navigating the said canal. The President of the said Canal Company is authorized to give all passes that may be required to be used on the canal, subject to the approval of the Commander of the District.¹⁰⁰

⁹⁷ Greene to Ringgold, April 11, 1862, ltrs. Recd., C & O Co.

⁹⁸ Lincoln to Stanton, April 15, 1862, in Basler, *Collected Works of Lincoln*, Vol. V, 191.

⁹⁹ Ringgold to Greene, April 16, 1862, Ltrs. Sent, C & O Co. A copy of the "Statement of Boats & Names of Owners &c.—Held by the U.S. Government from Books of the Quartermaster, U.S.A., Washington, D.C., April 17, 1861 [1862]," may be seen in Appendix B.

¹⁰⁰ General Order No. 44, April 21, 1862, in Ltrs. Recd., C & O Co.

On the same day that the order was issued, the *National Intelligencer* reported that:

The canal continues in fine order, and boats with flour, grain, wood, and limestone arrive hourly. Our information tonight justifies the belief that on Monday next we shall welcome the first boats from Cumberland bringing large cargoes of coal; and, as the Aqueduct is now changed to a bridge, Georgetown must have the full benefit of the trade.¹⁰¹

Several weeks earlier, the board, in an effort to stimulate the coal trade, had granted permission to J. E. Reeside to experiment with steam-propelled boats in the transportation of coal.¹⁰²

Meanwhile, Superintendent Jacob Masters of the Williamsport Division had reported in early April that while there was plenty of water for navigation, it would be wise to repair the damage done to Dam No. 5 by the Confederates in December 1861. The repairs, which could be undertaken as soon as the stage of the Potomac fell, were to be made either by building upon the foundations of the old crib, which were still standing, or by closing the space between the new masonry dam and the abutments of the old.¹⁰³ The canal board authorized Masters to commence the project at an opportune time and allocated the necessary funds.¹⁰⁴

Despite the shortage of boats, traffic on the canal quickly increased. Tolls collected for April reached \$4, 637, a figure five times the March total.¹⁰⁵ During the last week of April, however, the canal was damaged heavily as torrential rains drenched the Potomac Valley, causing the river to rise rapidly and crest at Dam No. 4. Two residents of Williamsport complained that this was the

7th high water within the last 18 months. After every high water, we have had the unwelcome and astonishing news that the planks at the stop lock [at] Dam No. 4 had either not been put in, or if put in had gone out. Invariably has this been the case for the last 18 months or two years. The last high water proves that with all the sad experiences for that length of time with a cost of not less than \$50,000 to the canal but no improvement has been made, for the report is now that several of the plank gave way, and the rushing water has done its usual work of in some places filling up and others sweeping away its embankment.

The two Williamsport residents went on to castigate the canal board for its inefficient and shortsighted repair policy:

It is said the Repair can be made in two weeks but if the two weeks prove to be such weeks as it generally takes at that point, four instead of two will come nearer the time. Now the question is can there be no remedy for this intolerable evil, will the Board remain quiet and let this state of things continue until the canal for the want of means to keep up these continued repairs fail & become entirely worthless. We hope not. We hope and pray that your Honbl. Board will appoint a committee to investigate this matter, and see if some means cannot be devised that will effectually resist the weight of water at said stop lock which has proved as destructive to canal interest for the last two years. We say emphatically it can be done and at little cost. We have said that the canal has lost \$50,000

¹⁰¹ Washington *National Intelligencer*, April 21, 1862.

¹⁰² *Proceedings of the President and Board of Directors*, K, 287–288.

¹⁰³ Masters to Board of Directors, April 8, 1862, Ltrs. Recd., C & O Co.

¹⁰⁴ *Thirty-Fifth Annual Report* (1863), 4. The cost of repairs to Dam No. 5 totaled \$3,338.58 for 1862.

¹⁰⁵ *Ibid.* 8.

by the continued disasters by the giving away of the Stop Lock. The basis of our calculation is this. 7 times the level's damaged that required \$2,000 to make full repair, \$14,000—average the loss of toll each time, 12 days @ \$500 per day, \$42,000—add \$14,000 cost of repair—and we have \$56,000 to the company at this point.

Furthermore, it was charged that such disasters had cost the canal its flour trade, two-thirds of which had been taken over by the Baltimore and Ohio Railroad during the preceding decade. Millers had complained that they could not rely on the canal for ten days at a time, and they had been compelled to find a more reliable channel of transportation.¹⁰⁶

When news of the damage caused by the freshet reached Cumberland, A. C. Greene, one of the canal directors and an agent of the Borden Mining Company, exploded:

The concurrence of circumstances against the resumption of canal trade this spring are positively infernal. Not only is the canal deprived of revenue, but the trade itself is imperiled by the untoward events. I have great fears that the largest and most important buyers of coal will despair of getting anything from us this year.

Already the Broad Top Company of Pennsylvania was "straining everything to retain" its foothold in the District cities' coal market that it had secured the previous year. At the time of the difficulties he had some 1,800 tons of coal en route to Georgetown, and nearly 7,000 tons ready for loading at the Cumberland wharves. Greene trusted that every effort would be made to restore navigation as soon as possible, as much depended on the boatmen's ability to deliver the coal in early May. As the Baltimore and Ohio was still out of operation, the canal was the sole outlet to market for the Cumberland coal.¹⁰⁷

The superintendents of the Williamsport and Antietam Divisions pushed the repair crews hard to shore up the battered embankments and clear out the obstructions. Continued rains added to their difficulties, but by May 8 water was readmitted to these divisions from the feeders at Dam Nos. 3 and 4, and the entire canal was again open to navigation.¹⁰⁸

Traffic on the canal increased rapidly, but on the night of May 14 heavy rains fell on the upper reaches of the Potomac's watershed, causing a rapid rise on the river above Dam No. 5. The work programs to repair the damage inflicted on the dam by the Confederates in December 1861 had not been completed, and the high water caused considerable damage to that structure. Encouraged by the presence of President Spates who had rushed to the scene of the latest disaster, the work crews were able to effect temporary repairs and prevent any interruption to navigation at this critical period.¹⁰⁹

In May 1862 General Stonewall Jackson launched his famous lightning like offensive in the Shenandoah Valley. Following defeats at McDowell, Front Royal, and Winchester, the battle-weary Federals fled toward the Potomac. Thus the shifting tide of war in the Shenandoah at a time when there was heavy traffic on the canal again threatened commerce on the waterway.¹¹⁰

¹⁰⁶ Embrey and Son to Dellinger and Greene to Ringgold, April 26, 1862, Ltrs. Recd., C&O Co. The railroad had made a determined effort to win the flour trade away from the canal in the 1840s. Nevertheless, the flour trade continued to be one of the larger though erratic sources of revenue. From 14,880 tons in 1843, it rose to 25,761 tons in 1851 and fell to 11,087 tons in 1860. In 1861 it had dropped to 7,067 tons, and after a slight recovery to 7,340 tons in 1862 and 8,566 in 1863, it declined to 5,962 tons and 5,383 tons in 1864 and 1865 respectively, Sanderlin, *Great National Project*, 217.

¹⁰⁷ Greene to Ringgold, April 29, 1862, Ltrs. Recd., C & O Co.

¹⁰⁸ Spates to Ringgold, May 2, 1862, Ltrs. Recd., C & O Co.

¹⁰⁹ Greene to Ringgold, May 15, 1862, Ltrs. Recd., C & O Co.

¹¹⁰ Bearss, "1862 Brings Hard Times," 442-443.

In May 26 most of the Union troops crossed to the Maryland side of the river at Williamsport. The soldiers and their wagons crossed the river on a ferry and marched over the bridge spanning the canal. One brigade, however, recrossed the Potomac at Jameson's Ferry, three miles above Dam No. 4. The recent rains had swollen the river and made the crossings a laborious effort.

Rebel cavalry units hounded the rear guard of the Union army as far as Martinsburg, where on the 27th, they captured a large amount of supplies. The next day, two squadrons of the 2nd Virginia Cavalry made a forced reconnaissance to within one mile of the Potomac, but Union batteries, emplaced near the canal at Williamsport went into action and forced the Confederates to withdraw. On the 29th, several Confederate forces in the area united under Brigadier General Charles W. Winder and carried out Jackson's instructions to attack with artillery the Federal troops of Brigadier General Rufus Saxton posted on Bolivar Heights covering the approaches to Harpers Ferry. However, word soon reached Jackson that a strong Union column under Major General James Shields was advancing westward from the Manassas area toward the Blue Ridge, while a powerful force under Major General John C. Fremont was approaching across the mountains from South Branch. As the two Federal divisions would sever his line of communications, Jackson pulled his men back from Bolivar Heights and retired rapidly up the Shenandoah Valley before the jaws of the trap snapped shut.¹¹¹

Following the Confederate withdrawal, the Union armies quickly reestablished control of the south bank of the Potomac. By June 4th, the Federals were again in possession of Martinsburg, Charles Town, and Winchester. A survey showed that the Confederates had done little damage to the Baltimore and Ohio during their brief stay in the area, and it was predicted that through trains would again be running east and west out of Martinsburg within one week.¹¹²

The company stockholders were informed by President Spates at their annual meeting on June 2 that the heavy spring rains and the shortage of boats had retarded business activity on the waterway since the resumption of navigation in mid-April. The entire trade up to May 31 did not comprise one full month of normal operations. All told, only 25,259 tons of coal had been shipped from Cumberland, yielding a meager \$18,449.86 in toll revenues.¹¹³

Heavy rains in early June which caused the Potomac to flood hampered the Union army's efforts to cross and recross the river. On the night of June 4 the railroad bridge at Harpers Ferry was swept away along with lesser important railroad bridges and trestles in the area, thus severing the line of the Baltimore and Ohio. Until the river crested and fell, it would be impossible for the Union trains and remaining columns to cross. To aid in the crossing, a steam tug was sent up the canal from Georgetown and placed in the river at Harpers Ferry. On the 5th the rains ceased and the river began to recede and by the evening of June 8 the last of the Federal wagons got back over to the Maryland side of the Potomac at Williamsport.¹¹⁴

The June flood also caused extensive damage to the canal. On June 2, two days before the Harpers Ferry Bridge was destroyed, a break occurred in the waterway near the Antietam Iron-works. The break was so sudden that a work scow was swept through the breach and smashed. First reports indicated that it would take about one week to repair the break, but President Spates urged the division superintendent to turn out as large a force as possible including available boatmen, and to institute round-the-clock working parties.¹¹⁵

¹¹¹ O. R., Series I, Vol. XII, pt. 1, 530–535, 606–607, 626–640, 707, 730, 738, pt. 3, 530.

¹¹² *Ibid.*, Series I, Vol. XII, pt. 1, 539–541, 813–814.

¹¹³ *Thirty-Fourth Annual Report* (1862), 5–6.

¹¹⁴ O. R., Series I, Vol. XII, pt. 1, 540–542, pt. 3, 304, 323, 342, 361–362.

¹¹⁵ Benton to Ringgold, June 3, 1862, and Spates to Ringgold, June 4, 1862, Ltrs. Recd., C & O Co.

In a letter on June 12, A. C. Greene urged President Spates to rush the repairs on the Antietam Division, because the flood damage to the Baltimore and Ohio and Confederate demolitions at Martinsburg had cut off all transportation of coal to the District Cities. It was imperative that coal shipments be resumed quickly on the canal so that demand could be met. As flooding had damaged the Pennsylvania rail network, there was the prospect of a heavy demand for Cumberland coal and it was of great importance that the waterway be ready to grasp the opportunity.¹¹⁶

When there still was no through navigation on the canal by June 21, Greene complained that "it is 1000 pities" that "we are in no condition to meet this call for coal." He trusted that repairs were being pushed on the Antietam Division and that attention was also being given to Dam No. 5. Unless a close check was kept on the pool above that structure, there would be insufficient water for navigation during the dry summer months.¹¹⁷

By the end of June, construction crews had a new railroad bridge in operation across the Potomac at Harpers Ferry. However, the canal above Dam No. 3 was still dry. As a result, the receipts from tolls, which had amounted to \$11,607.72 in May, had fallen to \$3,813.61 in June.¹¹⁸

On the evening of June 28, water was admitted to the canal above Harpers Ferry, and it was predicted that boats would start arriving at Cumberland by July 2. However, as work had dragged on at Dam No. 5, the pool behind that structure was too low to supply water to the sections of the canal between Dam Nos. 4 and 5, thereby delaying navigation.¹¹⁹ A heavy rain during the night of July 1 eased the low-water problem but created another by washing a "good amount of sand" back into the canal at Dam No. 4.¹²⁰

Meanwhile, the canal company was continuing to receive distressing news of the effect of the war on the mills along the waterway. On June 26, the board was informed that the Columbia Mills in Georgetown, which had not been in operation for some eighteen months, had been sold by Boyce and Taylor to Herr and Welch. Despite the dismal outlook, the company negotiated a 20-year water lease to the new company.¹²¹

Work on getting a suitable depth of water in the canal throughout its entire length continued to drag during the summer months. The division superintendents and their crews appeared to be more inefficient than at any time in the previous history of the canal. By July 24 a troublesome breach above Hancock had been repaired, and work on Dam No. 5 had progressed to the point that boats laden with coal were now able for the first time since July 2 to make the run from Cumberland to Georgetown. Accordingly, toll collections for July showed an increase over June of nearly 50 percent to \$7,130.73.¹²²

More trouble befell the canal on August 4 when a leak in Dam No. 6 caused an "utter failure" of navigation at that point. Superintendent Lowe reported that same day that one of the leaks had been located, and that the water in the pool was slowly rising. Because of the severe drought, it would have been helpful if the steam pump at the South Branch, which had been vandalized by a Confederate band the previous winter, had been repaired, but no funds were available for such work. Lowe, one of the most efficient superintendents, commenced the construction of a crib to prevent the bank at the dam from washing, and navigation was commenced the following day.¹²³

¹¹⁶ Greene to Ringgold, June 12, 1862, Ltrs. Recd., C & O Co.

¹¹⁷ *Ibid*, June 21, 1862, Ltrs. Recd., C & O Co.

¹¹⁸ *Thirty-Fifth Annual Report* (1863), 8.

¹¹⁹ Greene to Ringgold, July 2, 1862, Ltrs. Recd., C & O Co.

¹²⁰ Benton to Ringgold, July 2, 1862, Ltrs. Recd., C & O Co.

¹²¹ *Proceedings of the President and Board of Directors*, K, 290–291, 298–299, 305.

¹²² Spates to Ringgold, July 24, 1862, Ltrs. Recd., C & O Co., and *Thirty-Fifth Annual Report* (1863), 8.

¹²³ Greene to Ringgold, August 4, 1862, and Spates to Ringgold, August 26, 1862, Ltrs. Recd., C & O Co.

It was reported that the first boats in a week arrived at Cumberland on August 6. Nevertheless, canal officials were distressed that no rain had fallen in the Potomac Valley for nearly a month. As the drought continued to worsen, it was feared that low water would soon terminate through navigation on the canal. If no rain came, Greene hoped that there would soon be a big "battle with substantial victory on our side."¹²⁴

Canal officials, including Clerk Ringgold and Director Greene, soon became irritated with the inefficiency and mismanagement of the canal by the division superintendents. On August 8, Ringgold observed:

The frequent interruption in the navigation of the canal is very discouraging and from mismanagement or some other cause, has been worse this season than at any former period. Unless some remedy can be speedily adopted, I apprehend the most unfavorable results.¹²⁵

Angered by reports that navigation had been delayed again by sand bars near Point of Rocks, Greene wrote on August 11:

There has been no real through navigation on the Canal this year—that is no boat, I believe, has been able to make a round trip without detention. Whatever may be the excuse for the troubles above Harper's Ferry, there can certainly be none whatever, for neglecting the removal of sand bars from the section at Point of Rocks until this time. That work most surely could have been done while the canal was idle from the damage at Dam No. 4 and the Supt. Of that division [Monocacy] is to blame for putting off attention to his work that length of time.

Greene was further incensed by the fact that the work at Dam No. 6 had been delayed by a lack of hands. As there were about 80 canal boats tied up in the vicinity, he was convinced that at least a dozen boatmen could be found who were willing to work on the dam for cash wages. Unless there was a speedy reform in the company management, Greene threatened to resign as he had no "idea of being disgraced by such mismanagement."¹²⁶

The following day Greene reported to Ringgold that he had received word that the boats, after being detained while the bars were removed, had started arriving at Georgetown. At the same time, there were rumors that a lack of water at Dam No. 4 had stopped through navigation. As no word of confirmation had been received from Superintendent Masters, Greene had informed the coal shippers to ignore the rumors. Several railroad passengers were now overheard to say that below Harper's Ferry, where the canal was visible from the trains, there was no water in the ditch. While these stories circulated, the coal operators were compelled to keep an "expensive force in idleness expecting the arrival of boats hourly." The Baltimore and Ohio had likewise kept locomotives and cars standing by "at large expense" expecting the boats. All this was taking place because division superintendents were ignoring orders of the directors to report any stoppages which occurred in their jurisdictions. Such mismanagement as had been witnessed that summer demanded an investigation, and he recommended that all the division superintendents be summoned to Washington for questioning.¹²⁷

¹²⁴ Greene to Ringgold, August 6, 1862, Ltrs. Recd., C & O Co.

¹²⁵ Ringgold to Greene, August 8, 1862, Ltrs. Sent, C & O Co.

¹²⁶ Greene to Ringgold, August 11, 1862, Ltrs. Recd., C & O Co.

¹²⁷ *Ibid.*, August 12, 1862, Ltrs. Recd., C & O Co.

The military also was becoming irritated with the inefficiency of several division superintendents and the pro-Southern sympathies of some canal employees. The post commander at Point of Rocks, Captain R. C. Bomford, complained on August 28 that Superintendent George Spates of the Monocacy Division was derelict in his duties. The entrance and chamber of Guard Lock No. 3 had been allowed to fill in with sediment, thus causing delays to heavily-loaded barges passing down the canal. The locks on the division were deteriorating badly, and the waste weirs were not fit for use. The towpath bridge across McGill's Ford just above Point of Rocks was so unsafe that every team that passed over it was in danger of being drowned. The towpath, especially at the high embankment at Calico Rocks, was in such disrepair that a rise in the water level of 2 or 3 inches above normal would cause a breach. The carpenters on the division had been kept busy at menial labor instead of repairing bridges and other structures. Moreover, Spates had employed two lock-keepers and one crew boss who were reportedly disloyal. The only way to weed out treason and inefficiency on the Monocacy Division, Bomford asserted, was for the company to fire George Spates and replace him with "a loyal man" so that "we can feel safe in passing him through our lines."¹²⁸

After reviewing the communications from Bomford, the board instructed Clerk Ringgold to request further information from the officer. On September 4, Ringgold drafted the following reply to Bomford on behalf of the board:

It is the earnest desire as it is the duty of this Board to see that no disloyal person is employed in any part of the work under their charge.

You make a distinct charge of your own personal knowledge against one so employed. We must have his name, not strike in the dark, and we call upon you as an officer and citizen to furnish the name without delay. You must be quite aware that to suppress the name under such circumstances will be conniving at the offence. If there are others whose names have been furnished to you with such information as will justify you in making distinct charges we desire to have those names and also the witnesses on whose statements the charge is based.¹²⁹

Before Bomford could answer the board's request for further information, the canal was once again to become a theater of active military operations. During the last week of June and on July 1, General Robert E. Lee, who had taken charge of the Army of Northern Virginia on June 1, had turned on and attacked McClellan's Army of the Potomac, then closing in on Richmond from the southeast. After compelling McClellan to retreat to the cover of a fortified camp at Harrison's Landing on the James River, Lee sent Jackson with three divisions to Orange, Virginia, to watch Major General John Pope's newly-constituted Army of Virginia. Following the defeat of Banks' corps of Pope's army at Cedar Mountain on August 9 by Jackson, Lee moved his forces to join the victorious Confederate divisions and set the stage for another Union defeat at the Battle of Second Manassas on August 29–30. The bluecoats fell back into the formidable defenses covering the approaches to Washington, and several days later, on September 2, the exposed Union force at Winchester under Brigadier General Julius White fell back to Harpers Ferry.¹³⁰

News of the Confederate offensive had important repercussions for the belligerents, as well as the canal company. When President Lincoln on August 4 ordered a draft of 300,000 militia to serve for nine months, the company appealed to Secretary Stanton to obtain exemptions for

¹²⁸ Bomford to Board of Directors, August 28, 1862, Ltrs. Recd., C & O Co.

¹²⁹ Ringgold to Bomford, September 4, 1862, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, K, 309.

¹³⁰ O. R., Series I, Vol. XII, pt. 3, 811.

its employees and the boatmen as the draft would have serious effects on the business operations of the canal.¹³¹

More ominous for the canal company was Lee's determination on September 3 to carry the war north of the Potomac. The Army of Northern Virginia was put in motion toward Loudoun County. On the morning of the 4th, a Confederate battery unlimbered its guns on Ball's Bluff and fired several volleys at a passing canal boat. General McClellan, who had been charged with repelling the Rebel invasion of Maryland, advised his superiors at the War Department that shelling canal boats "is an old amusement of the rebels; it is probably a pretty strong proof that they do not intend to cross at Edwards Ferry."¹³²

At Leesburg, Lee's lead division, under Major General D. H. Hill, made preparations for the offensive across the Potomac. One brigade was dispatched to the river across from Berlin to attack with artillery any Baltimore and Ohio trains that might be passing. With two brigades deployed in line of battle, Hill approached the river at White's Ford. This crossing of the Potomac and the nearby Monocacy Aqueduct were guarded by men of the 1st Potomac Home Guard Regiment and the 87th Ohio. The Union pickets quickly fled, and by nightfall Hill's combat-ready veterans had established a bridgehead almost without firing a shot.¹³³

Before allowing his troops to bivouac, Hill charged a detail with the task of stopping traffic on the canal and taking measures to make it easier for the main body of troops to cross the ditch. Near the Monocacy Aqueduct, the trunk could be crossed by a few pivot bridges and under passed by the White's Ford Culvert. Since these structures would turn into bottlenecks for the Army of Northern Virginia, General Hill had a fatigue party wreck the Little Monocacy Culvert and drain the Seven-Mile Level. The berm and towpath banks were cut down, the prism corduroyed, and the artillery and trains started rolling across. The next morning, on the 5th, Stonewall Jackson's corps forded the Potomac, crossed the canal, and pushed for Frederick.¹³⁴

Meanwhile, the men from Hill's division charged with wrecking key canal structures in the area were at work. Thomas Walter, the tender at Lock No. 27 who had worked for the canal company for 30 years and was one of the men believed by Captain Bomford to be disloyal to the Union cause, pled with General Hill not to destroy the aqueduct or the lock. If the Confederates intended to stop navigation on the waterway, he informed the general that it would be easier to cut down the banks than blow up the masonry structures. General Hill disagreed, and for awhile the discussion between the officer and the lock tender became so heated that bystanders feared that Walter would be arrested.¹³⁵

After consulting with his chiefs of ordnance and engineers, Hill learned that in the division there were not enough tools or spare powder to insure the destruction of the Monocacy Aqueduct, so he ordered his demolition team to concentrate on Lock No. 27. A hole was drilled into the masonry of the lock and a small charge of powder was detonated, causing slight damage to the structure. Having breached the Little Monocacy Culvert, cut down the banks at several points, and burned several canal boats trapped on the Seven-Mile Level, Hill recalled his troops on the evening of September 5 and proceeded toward Frederick to join Jackson. During the next several

¹³¹ Ringgold to Stanton, August 21, 1862, Ltrs. Sent, C & O Co. Events were to calm the anxieties of the canal officials, because the draft was never put into effect. Long, *Civil War, Day by Day*, 247.

¹³² O. R., Series I, Vol. XIX, pt. 2, 175.

¹³³ *Ibid.*, pt. 1, 1019, pt. 2, 144–145.

¹³⁴ *Ibid.*, pt. 1, 952.

¹³⁵ Petition to Board of Directors, October 14, 1862, Ltrs. Recd., C&O Co. When the canal company later moved to discharge Walter for collaborating with the enemy, a petition was sent to the directors from his neighbors asking that no disciplinary action be taken against him because of his successful effort to save the Monocacy Aqueduct from destruction...

days, other units of Lee's Army of Northern Virginia crossed the Potomac and canal at White's Ford.¹³⁶

On September 9 at Frederick, Lee divided his army into three major units and commenced operations to move against the strong Union force under Colonel Dixon Miles that was holding the Harpers Ferry–Martinsburg area. By eliminating Miles' command, Lee would be able to supply his army via the Shenandoah Valley. Accordingly, Jackson moved out with his corps, crossed South Mountain, passed through Boonsboro, turned southwestward, and struck for the Potomac. Major General Lafayette McLaws with two divisions advanced across Pleasant Valley, and took position on Maryland Heights which commanded Harpers Ferry on the north. The division under Major General John G. Walker was to destroy the Monocacy Aqueduct, recross the Potomac at Cheek's Ford, and occupy Loudoun Heights. With the remainder of his troops, Lee would cover Jackson's column, taking position to hold the South Mountain gaps.¹³⁷

Reaching the Monocacy Aqueduct just before midnight on September 9, Walker's division quickly drove off the thin line of Union pickets holding the aqueduct. Fatigue parties were organized, tools were passed out, and men put to work drilling holes for placing charges to wreck each of the seven arches of this aqueduct. After several hours, Walker's chief engineer reported little progress, complaining that the drills were extremely dull while the masonry was of "extraordinary solidity and massiveness." To demolish the aqueduct would take days not hours. As this would ruin Lee's plan for the attack against Harpers Ferry, the fatigue parties were recalled.¹³⁸

That same night a Union force moved into the area, took possession of the aqueduct, and placed artillery to command the approaches to that structure as well as Cheek's Ford. Surprised by the Union advance, Walker determined to recross the Potomac farther upstream at Point of Rocks on the night of September 10. The crossing was carried out with much difficulty, owing to the destruction of the pivot bridge over the canal at Lock No. 28 and the steepness of the river banks.¹³⁹

The Confederate invasion of Maryland had a disastrous effect on the operations of the canal and its ability to carry provisions and coal to the Union armies and the civilian population of the District cities. The Washington *Evening Star* reported on September 12:

Canal navigation is suspended beyond a point twenty miles from here—that is, at Seneca Dam. From that point up, for from thirty to forty miles, there is no water in the canal, the Confederate forces having drawn it off a week ago, by blowing up a culvert, when they first crossed into Maryland—hence supplies for the army cannot be sent up by canal further than Seneca.

This suspension of navigation with the up country of course cuts off arrivals of flour and grain from the fine grain-growing country in Maryland and Virginia lying near the Potomac. The market here, therefore, is very unsettled, and the stock of flour on hand is held at considerably higher figures by wholesale dealers. The only sales since the suspension is of high grades extra, in small lots, at from \$7 to \$8, according to quality, mostly at the intermediate rate of \$7.50. The government contract closed last week was taken at rates considerably below these figures.

¹³⁶ Spates to Ringgold, September 13, 1862, Ltrs. Recd., C&O Co. In this letter, Spates wrote that the damage could be repaired in two or three weeks with an adequate force and the necessary funds. He had made arrangements with a gentleman to put a large force of horses, carts, and hands to work on the repairs, but since the Rebels were holding the river at Point of Rocks nothing could be done

¹³⁷ Bearss, "1862 Brings Hard Times," 450.

¹³⁸ O. R., Series I, Vol. XIX, pt. 1, 912–913.

¹³⁹ *Ibid.*

There is a fair stock of wheat in millers' hands, and they are buying the limited quantity brought by wagons at rates ranging from \$1.35 to \$1.40, for red. Any considerable lots of good red would command \$1.37 to \$1.40, and prime \$1.40 to \$1.45 per bushel.

In corn, nothing doing, there being no arrivals: Prices have advanced from 2 to 5 cents this week, and good white would fetch from 70 to 75 cents per bushel. Oats are more active, with further supplies from Baltimore, fetching from 45 to 50 cents for good new, but for heavy old oats 60 cts. are paid. Some of the very light new oats sell as low as 35 to 40 cents per bushel measure.

The coal trade from Cumberland is of course entirely cut off, perhaps for the season. A fair supply had already been bought forward.

The harbor of Georgetown looks very active, with numerous steamers moving about, as well as other vessels, mostly in government trade.

Hay in bales sells at \$20 per ton, an advance of \$1 within a week.¹⁴⁰

Meanwhile, Lee's forces were converging on the Union troops holding Martinsburg and Harpers Ferry. On the 11th, Jackson's columns passed through Williamsport and crossed the canal and the Potomac at Light's Ford, and on the 12th forced General White's troops to evacuate Martinsburg and retire to Harpers Ferry. After closing in and investing the 11,000-man Union garrison at Harpers Ferry for two days, the Confederates accepted the surrender of the surrounded Federals on September 15. Meanwhile, McClellan's bluecoats had forced the Southern forces to abandon Turner's and Fox's Gaps on South Mountain, and General Lee fell back behind Antietam Creek, thus setting the stage for the bloody Battle of Antietam fought on September 17.¹⁴¹

Shortly after the fighting began, General McClellan dispatched Captain Charles H. Russell with his company of the 1st Maryland Cavalry to Williamsport to burn the pivot bridge across the canal at Lock No. 44 and to destroy the Conococheague Aqueduct in an effort to cut one of Lee's avenues of retreat. With the aid of some Pennsylvania militiamen who were holding the town, Russell's men destroyed the pivot bridge, organized demolition teams, and burned eleven boats, nine of which were loaded with coal, that had been forced to tie up at Williamsport. Unable to materially damage the sturdy masonry of the aqueduct, Russell's troops returned to the battlefield and the Pennsylvanians withdrew to Hagerstown. By the end of the fighting in the area, some of the coal from the fired boats was still smoking, and a group of local citizens extinguished the fires, salvaging what coal remained.¹⁴²

On the day following the bloody event at Antietam, the two armies lay exhausted in their positions. Then under the cover of darkness on the 19th, the Confederates retired across the Potomac into Virginia at Boteler's Ford near Shepherdstown. Three brigades formed the rear guard and remained in line on the Maryland side until the crossing was accomplished.¹⁴³

When McClellan learned of the Confederate withdrawal, he sent Major General Fitz John Porter's V Corps to pursue Lee's battered army. When Porter reached the river, he found that the Rebels were holding the southern bank and defending the fords with 44 artillery pieces. Determining to clear the fords and, if possible, cross the Potomac and capture the guns, a strong force of skirmishers advanced and took position along the embankment of the towpath side of the canal, from which the water had been withdrawn earlier, and along the river bank. Covered by the

¹⁴⁰ Washington *Evening Star*, September 12, 1862.

¹⁴¹ Bearss, "1862 brings Hard Times", 451.

¹⁴² Miller to Ringgold, October 3, 1862, Greene to Ringgold, December 2, 1862, and Masters to Board of Directors, February 8, 1864, Ltrs. Recd., C & O Co.

¹⁴³ O. R., Series I, Vol. XIX, 986.

fire of the sharpshooters and a heavy artillery barrage, the Federals stormed across the Potomac at Boteler's Ford, scaled the heights beyond, and captured five cannon. The next day, the Confederates under Jackson counter-attacked and drove the Union troops back through Shepherdstown and across the Potomac. Most of the retreating men used the ford while some walked across the river on the top of the Potomac Mills dam. As the Union armies fled across the river, a large contingent of the Rebel line advanced to the river bank, where some took cover in the burned-out Potomac Mill. A steady fire was maintained, inflicting a number of casualties upon the retiring enemy. Once across the river, the Federals deployed a line behind the canal embankment until they were relieved on the 21st. The Rebels remained on the field until nightfall, when upon being relieved by cavalry units, they marched to rejoin the main body.¹⁴⁴

Meanwhile, the Confederate cavalry leader, Major General James E. B. "Jeb" Stuart, had been ordered by General Lee to take several cavalry and infantry units and recross the Potomac into Maryland at Williamsport, thus creating a useful diversion by exposing McClellan's flank. Under the cover of darkness on the 19th some of the troops forded the Potomac above the town, while a contingent crossed the river at Williamsport and put to flight some Union pickets. A working party was organized and quickly opened a good road under the Conococheague Aqueduct. By passing under the canal, the confederates moved out and took position on the ridges beyond Williamsport before daybreak. On the 20th, the Rebels attempted to expand their bridgehead, but after encountering a heavy force of Union cavalry converging on the town, they withdrew at dark across the Potomac. During their one-day occupation of Williamsport, the Southern cavalry burned one canal boat, *Independence*, and the gates of Lock 44, and wrecked Lockhouse No. 44.¹⁴⁵

Following the Confederate withdrawal from Williamsport into Virginia, Superintendent Masters reported to Clerk Ringgold on September 22:

We have been cut off from the outside world until yesterday so that we had no opportunity to send or receive anything by mail since the 6th of Sept. The damage done the canal at this place [Williamsport] by the recent military operations will amount to \$2,000 beside the loss of eleven canal boats burnt...If necessary the damage here can be repaired in a week's time; the most serious is the burning of the lock gates.¹⁴⁶

Immediately following the Battle of Antietam and the Confederate withdrawal into Virginia, General McClellan proposed to establish a supply depot for his army near Harpers Ferry. Consequently, it would be vital to reopen for trade as soon as possible the canal and the railroad. On September 21, McClellan's chief quartermaster, Lieutenant Colonel Rufus Ingalls, wrote Quartermaster General Meigs requesting that orders be issued for the repair of the waterway. When it was reported that repairs could not be commenced as long as the Confederates occupied portions of the southern bank of the Potomac and kept the canal under artillery fire, McClellan promised full protection to the repair crews and to the boats, once the waterway was reopened. As soon as navigation was resumed, all the small steamers plying the canal were to be sent to Harpers Ferry.¹⁴⁷

¹⁴⁴ *Ibid.* 338–340, 344–349, 351–352, 830–833, 912–913, 957, 982, 986, 989–990, 1001–1004. For a more complete study of the fighting in the aftermath of the Battle of Antietam, see John F. Luzader, "Historic Sites, Shepherdstown, W. Va." (NPS MSS., 1963), 4–19.

¹⁴⁵ Masters to Board of Directors, February 8, 1864, Ltrs. Recd., C & O Co., and Bearss, "1862 brings Hard Times", 452.

¹⁴⁶ Masters to Ringgold, September 22, 1862, Ltrs. Recd., C & O Co.

¹⁴⁷ O. R., Series I, Vol. XIX, pt. 2, 339–340, 342–343.

By late September, Lee's Army of Northern Virginia had pulled back into the Winchester area, thus enabling the canal repairs to proceed without hindrance. The *Washington Evening Star* reported on the 26th that:

There is some hope now that the Chesapeake and Ohio Canal may be rendered navigable again for the fall trade. It is found that the damage done it by the Confederate forces was not so great as had been apprehended ... therefore the repairs may be easily made if the line is kept free of the enemy.¹⁴⁸

McClellan, on September 30, ordered the formation of large fatigue parties to assist canal officials in effecting repairs. On October 1, a 65-man detail reported to Superintendent George W. Spates of the Monocacy Division. The soldiers were put to work closing the breach at the Little Monocacy Culvert, thus freeing the regular division repair crews to patch the masonry at Lock No. 27. The military detail was enlarged to a force of 150 on October 7, and Spates reported on the 14th that his division was again ready for navigation.¹⁴⁹

During the first week of October, President Spates inspected the canal from Williamsport to Cumberland. He was to see that initial reports of heavy damage to the Antietam and Williamsport Divisions had been exaggerated. Except for the actions of the Maryland and Pennsylvania troops, there would have been little destruction at Williamsport. On the Antietam Division, the only damage done by the invaders was the burning of the gates at Guard Locks Nos. 3 and 4. Although the Confederates had burned all the railroad bridges between Sir Johns Run and South Branch, there was no damage to the canal above Williamsport. Of more immediate concern was the drought in the Potomac Valley that had reduced the depth of the river at Cumberland to three feet.¹⁵⁰

Early in October the Confederates staged two raids designed to harass McClellan's buildup and wreak havoc on the Union supply lines. Col. John D. Imboden and 900 men left their base at Camp Lee in Hardy County, and after surprising a Union patrol at Hanging Rock, they attacked the entrenched camp manned by Company K, 54th Pennsylvania, at the mouth of Little Cacapon on the 4th. After forcing the Federals to surrender, the Baltimore and Ohio Bridge across the Little Cacapon was burned, along with the encampment. A cavalry battalion was sent across the Potomac to cut off the escape of the Federals posted at the Paw Paw Railroad Tunnel. Moving down the canal towpath, the Rebel horsemen forced the encampment of Company B, 54th Pennsylvania, located some 500 yards from Paw Paw Tunnel to surrender. While the Confederates were destroying the captured camp and equipment, they learned that the guard at their base camp near Cacapon Bridge had been scattered by Union cavalry. This news caused Imboden to abandon his plans to destroy the railroad bridge across South branch and withdraw from the area.¹⁵¹

In the early morning hours of October 10, General "Jeb" Stuart crossed the Potomac at McCoy's Ferry with 1,800 horse soldiers and four guns. The sixteen Union pickets in the area were driven in so rapidly that they were cut off from their reserve and were unable to report the attack. Informed that the Confederates were fording the river by a long-time local resident, Launcelot Jacques, Captain Thomas Logan immediately moved his troops camped at Green Springs Furnace to mount, but Stuart's horsemen had already pushed northward toward Chambersburg.

¹⁴⁸ *Washington Evening Star*, September 26, 1862.

¹⁴⁹ Spates to Ringgold, September 30, October 6, 14, 1862, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, K, 310–311.

¹⁵⁰ Spates to Ringgold, October 6, 1862, Ltrs. Recd., C & O Co. Also see, Benton to Ringgold, October 18, 1862, Ltrs. Recd., C & O Co. On October 9, the canal company requested an army detail to help repair the Williamsport Division. *Proceedings of the President and Board of Directors*, K, 310–311.

¹⁵¹ O. R., Series I, Vol. XIX, pt. 2, 16–25, 631.

As the Rebel objective was to destroy the machine shops and depot at that town, they did not attempt to damage the canal. After committing their destructive acts at Chambersburg on the 11th, the Rebels turned back toward Virginia and determined to cross the canal and Potomac at White's Ford before the Union troops, numbering between 4,000 and 5,000, at Poolesville and Mouth of Monocacy could intercept them.¹⁵² Although a battalion of the 99th Pennsylvania was posted on a precipitous quarry bluff overlooking the crossing, the bluecoats, after receiving word of the Confederate advance, quickly abandoned their position and marched eastward down the towpath to Weedon's Ford, thus permitting the Rebels a secure crossing of the river.¹⁵³

While Stuart's Chambersburg Raid increased the growing dissatisfaction of government officials with the performance of General McClellan, the canal suffered no damage at the hands of the Rebel raiders. On October 14, water was readmitted to the Monocacy Division. Although the damage inflicted on the canal by the Confederates during their Antietam Campaign had been repaired, there would be no through navigation on the canal until the drought was broken.¹⁵⁴

Heavy rains during the latter part of October caused the Potomac to rise. However, the high water caused a serious breach at Dam No. 5 on November 4, because the new masonry dam was still only partially completed as a result of the recent military activities in the valley. Thus, there was not enough water in the pool to induce a sufficient depth of water on the Williamsport Division to float heavily laden boats.¹⁵⁵

The canal trade was hampered further during the final days of October when McClellan, goaded by President Lincoln and Secretary Stanton put his Army of the Potomac into motion. Beginning on the 26th, the Federals crossed the Potomac at Berlin, White's Ford, and Edwards Ferry on pontoon bridges which had been sent up the canal from Washington. To facilitate the movement of this ponderous army, Union engineers threw four bridges across the canal that was so low that they stopped all traffic on the waterway. This news caused the Cumberland coal companies to withdraw the boats that had pulled into the basin ready to load. Large numbers of miners, concluding that canal navigation was over for the season left Allegany County and headed for Pennsylvania.¹⁵⁶

It was November 2 before the entire Army of the Potomac had crossed the river into Virginia. For the next three days, the army continued to be supplied from the big depots that had been established at Berlin and Harpers Ferry. Brigadier General George Stoneman's division, which had crossed the river on October 27 and occupied Leesburg, was supplied by canal boats sent from Washington to the Edwards Ferry River Locks where they crossed the Potomac and passed up Goose Creek to the turnpike where a depot had been established. By November 5, the Union army was in contact with the Manassas Gap Railroad and henceforth it used that line to transport its rations, munitions, clothing and fodder.¹⁵⁷

Canal company officials and boatmen alike laid plans to resume navigation as soon as the low bridges at Berlin were dismantled on November 12. That evening a fleet of 36 boats, loaded

¹⁵² *Ibid*, 36–37, 52–53, and Hassett to Ringgold, October 14, 1862, Ltrs. Recd., C & O Co.

¹⁵³ O. R., Series I, Vol. XIX, pt. 2, 50, and Bearss, "1862 Brings Hard Times", 456–457.

¹⁵⁴ Bearss, "1862 Brings Hard Times", 457.

¹⁵⁵ *Proceedings of the President and Board of Directors*, K, 313, and Greene to Ringgold, November 4, 1862, Ltrs. Recd., C & O Co.

¹⁵⁶ Greene to Ringgold, November 13, 1862, Ltrs. Recd., C & O Co., and O. R., Series I, Vol. XIX, pt. 2, 494, 499. It is interesting to note that on October 25, the day before the Federals began this operation, McClellan had his Assistant Adjutant General send a letter to President Spates promising that the Army of the Potomac would discontinue activities that hampered canal operations. Williams to Spates, October 25, 1862, in Spates Papers.

¹⁵⁷ O. R., Series I, Vol. XIX, pt. 2, 494, 531, 544.

with bridge materials, started down the canal. The next morning, 40 additional boats with the remainder of the pontoons, stringers, and sleepers proceeded to Washington.¹⁵⁸

At the same time, company official took steps to close the critical breach at Dam No. 5. The board had grown increasingly dissatisfied with Superintendent Masters for "his neglect and inattention to his duties" and "his want of action ... in the maintenance of his division" which had "contributed much to the loss of revenue and of business upon the canal."¹⁵⁹ Accordingly, the directors assigned the job of repairing the dam to Superintendent Hassett of the Hancock Division. By the 17th, the leak had been repaired, the water behind the dam had been raised several feet, and there was sufficient water along the entire canal for the first time in a month.¹⁶⁰

Just as the company, boat captains, and shippers were preparing to capitalize on the improved situation along the Potomac, a small-scale raid by some Virginia cavalry caused some anxious moments. On the evening of November 24, a small Confederate band slipped across the Potomac at Conrad's Ferry, swept into Poolesville where they captured 16 Federals and a telegraph operator, and quickly recrossed the river at White's Ford. Despite fears that the raiders would cut the canal, it was found that no damage had been done.¹⁶¹

Even with all these difficulties, commerce on the canal showed a great increase in November as toll revenues rose to \$6,084.10 from \$538.78 the previous month.¹⁶² President Spates was so encouraged by this turn of events that he boasted the "canal has not been in better order for 10 years than now with a few exceptions." One of the main exceptions was the run-down condition of the Georgetown Division. Superintendent Horace Benton had neglected the division, especially the needed repairs at Lock No. 3.¹⁶³

In early December 1862 the U. S. Treasury Department took cognizance of the fact that the canal provided the government with an established route of communication along the boundary between the North and South. Accordingly, upon the recommendation of President Spates and the authorization by military authorities who conducted "loyalty investigations," six canal employees were appointed to act as revenue agents at \$2 a day. These men and their revenue-collecting offices were: George W. Spates at Poolesville; Levi Benton at Sharpsburg; John Warner at Shepherds Landing; Joseph F. Farrow at Williamsport; Thomas Hassett at Four Locks; and A. C. Blackman at Hancock. Four other individuals who were not employed by the company were appointed as revenue agents at Point of Rocks, Harpers Ferry, Dam No. 5, and Cumberland.¹⁶⁴

President Spates and Director Greene remained in Cumberland to expedite the shipment of all the coal they could in the final weeks of the boating season. As a hard freeze was expected in the mountains at any time and there were too few boats available for the amount of coal to be shipped, competition for the boats was keen with boatmen able to demand higher freight rates of up to \$2.50 per ton from the shippers.¹⁶⁵

Several icebreakers were outfitted to keep the Cumberland and Williamsport Divisions open as long as possible. On the 20th Spates reported that he had spent the past two weeks "doing all in my power by hard work & otherwise to keep the canal open."¹⁶⁶ As a result, the receipts

¹⁵⁸ *Ibid.*, Series I, Vol. XXI, 148–149.

¹⁵⁹ Greene to Ringgold, November 13, 1862, Ltrs. Recd., C & O Co.

¹⁶⁰ Spates to Ringgold, November 17, 1862, Ltrs. Recd., C & O Co.

¹⁶¹ O. R., Series I, Vol. XXI, 12, and Spates to Ringgold, November 26, 1862, Ltrs. Recd., C & O Co.

¹⁶² *Thirty-Fifth Annual Report* (1863), 8.

¹⁶³ Spates to Ringgold, December 1, 1862, Ltrs. Recd., C & O Co.

¹⁶⁴ *Ibid.*

¹⁶⁵ Greene to Ringgold, December 2, 5, 1862, Ltrs. Recd., C & O Co.

¹⁶⁶ Spates to Ringgold, December 2, 5, 9, 12, 20, 1862, and Masters to Board of Directors, December 30, 1862, Ltrs. Recd., C & O Co.

from tolls for December had been \$9,245.14, or more than 30 percent greater than November.¹⁶⁷ Hence navigation continued until February 1, 1863.¹⁶⁸

During the month of December, the canal board continued to receive reports about the inefficiency and dereliction of duty on the part of several division superintendents. The most remarkable charges were those against Superintendent George W. Spates of the Monocacy Division who was accused of remaining at his home near the mouth of the Monocacy River from August 13 to October 21 "transacting his farming affairs & hauling coal from the canal." Moreover, he had refused to reimburse the military for work scows borrowed for use by his repair crews, and he had failed to replace tools that had been burned by the Rebels. During his absence from the line, his workers had gone unpaid.¹⁶⁹

Upset by such charges of willful misconduct, the directors issued an order to all the division superintendents on December 11:

That the several Supts. of the Canal be required to conform themselves strictly to the rules and regulations of the Company, that said regulations be strictly conferred on all parties connected with the canal, and that said Supts. be required to pass over the entire length of their respective divisions at least once a week, and to report to the Clerk of the Company, and also to the Collectors of tolls at Georgetown and Cumberland, whenever any interruptions of the navigation shall occur, and how long such interruption will continue; that they also be required to make monthly reports to the Board of the condition of their respective divisions, and that and carelessness on their part in the performance of these duties will be deemed cause for their removal from office.¹⁷⁰

All told, the year 1862 was even more disastrous financially for the canal company than 1861. The aggregate tonnage on the canal declined more than 12 percent from 144,814 tons in 1861 to 126,793 tons in 1862. Toll revenues plummeted nearly 10 percent from \$70,566.99 in 1861 to \$63,985.85 in 1862. Receipts from all sources for 1862 amounted to \$72,624.95 while expenditures were \$231,711.68. As a result of the seizure of canal boats by the Federals in March, the Confederate invasion of Maryland in September, several major freshets, and the inefficiency of some division superintendents, the canal company reached its lowest ebb during the war in 1862.¹⁷¹

The equally distressing statistics of the aggregate Cumberland coal trade in 1862 were summarized in the Pottsville *Miners' Journal* of January 10, 1863:

Since the war broke out the trade from this Region has been almost entirely suspended. The Railroad only carried Coal in the months of May, June, July, August and September—and the trade on the Canal was interrupted entirely in the months of May and October, and only partially resumed in the other months....

In spite of its handicaps, the Cumberland region shipped about 318,000 tons in 1862, an increase of roughly 48,000 tons over the previous year.¹⁷²

¹⁶⁷ *Thirty-Fifth Annual Report* (1863), 8.

¹⁶⁸ Bearss, "1862 Brings Hard Times" 462.

¹⁶⁹ Chambers to Board of Directors, December 10, 1862, Ltrs. Recd., C & O Co.

¹⁷⁰ *Proceedings of the President and Board of Directors*, K, 315.

¹⁷¹ Sanderlin, *The Great National Project*, 307, 309.

¹⁷² Pottsville *Miners' Journal*, January 10, 1863, quoted in Harvey, "Civil War and the Maryland Coal Trade." 371.

IV. COMMERCE ON THE CANAL EXPERIENCES A REVIVAL: 1863

With the use of icebreakers and the help of the comparatively mild January weather, the canal remained open to navigation until February 1, 1863. It was during this time that a debate was carried on in the military, the War Department, and the Congress over what measures should be adopted to protect the canal and the railroad from further depredations by the Southern armies. One proposal that received some attention was that of Colonel Gabriel E. Porter who recommended that adequate protection could be accorded both transportation lines by establishing camps of instruction at strategic points between New Creek and Harpers Ferry. He emphasized the fact that concentrating troops in this area would provide training under actual war conditions, thereby resulting in appreciable savings to the Federal Treasury because officers could serve in the dual role of instructor and commander. Although the War Department rejected the proposal, Congress became sufficiently interested in Porter's plan to entertain a resolution offered by Representative Francis Thomas of Maryland on January 12:

That the Committee on Military Affairs be instructed to inquire into the expediency of providing for the establishment of camps of military instruction at suitable points on or near the Baltimore & Ohio Railroad, as an effectual means of protecting the Chesapeake & Ohio Canal and the Baltimore & Ohio Railroad, so that those public improvements may be safely used for the transportation of coal for the use of steam vessels of the United States Navy, and of supplies for the United States Army, while operating in Eastern Virginia, or on our Atlantic front.

The peak of interest in the proposal was reached in this resolution, and the problem of protecting the strategic canal and railroad was given back to the War Department.¹⁷³

On February 1, the water was withdrawn from the trunk so that necessary repairs could be made. During the month of February it was reported that the tender of Locks Nos. 1-4 in Georgetown had left his job without notice, and, consequently, the directors appointed Samuel Smart to that important position at the eastern terminus of the canal. About March 1 the canal was reopened to boat traffic and the pace of trade quickly picked up.¹⁷⁴

With the apparent course of the war changing in favor of the North, Congress in early March finally authorized an appropriation of \$13,000 for the raising of the Georgetown bridges over the canal to facilitate the expansion of trade. The bridges, which originally had been planned

¹⁷³ *Congressional Globe*, January 12, 1863, and Summers, *Baltimore & Ohio in Civil War*, 155-157. Later in 1863 and 1864, blockhouses were built at strategic points along the Potomac to guard the river fords. The blockhouses were

barns constructed out of the largest and longest logs that could be obtained, each barn being from forty to fifty feet square and ten to twelve feet in height. They were timbered on the top to keep the shells out and were notched through the sides for the purpose of shooting through above the earthworks. In building them, stone was first piled around the proposed foundation, about four feet high, then a deep ditch, four or five feet wide, is dug around the stone pile, the earth from the ditch being thrown upon the stones to a height of six or seven feet to protect the inmates of the house from shot and shell. The whole is surrounded with an abattis. . . and the entrance to the building was made in a zigzag fashion

Summers, *Baltimore & Ohio in Civil War*, 157-158.

¹⁷⁴ *Proceedings of the President and Board of Directors*, K, 318, 322-324.

and constructed according to the practice prevailing on the Erie Canal in the late 1820s, allowed a clearance of only 8 feet above the normal level of water in the canal. By 1850, the barges had become so large that they could pass fully loaded under the bridges but could not return empty until the water level in the canal was lowered. As a result, long delays which hampered trade to and from Rock Creek Basin soon forced much of the business on the waterway to pass over the Potomac Aqueduct and down the Alexandria Canal to the river at that city, from where it was taken to Washington by barge. To reopen the route through Georgetown, eight bridges and the market-house in Georgetown and one bridge over the basin needed to be raised to allow at least a 12-foot clearance. The board considered this improvement in the early 1850s, but after 1854 the matter was dropped as far as independent action by the canal company was concerned. Appeals to Congress for financial assistance failed to pass during the remainder of the decade.¹⁷⁵ The closing of the Potomac Aqueduct in 1861 seriously inconvenienced canal trade, and, after political pressure by canal, Georgetown, and Maryland authorities, Congress passed the appropriation.¹⁷⁶

Although canal officials soon met with the corporate authorities of Georgetown to discuss the most expedient plans for raising the bridges, the actual work did not get under way until April 1865.¹⁷⁷ Nevertheless, the Georgetown authorities responded to the authorization by passing two ordinances. First, it was determined on April 4 that the canal president should submit his plans for altering the bridges and market-house to them for approval before the work commenced. Second, on August 8 plans were approved for a new market-house to be constructed on the site of the present building which was to extend to within eight feet of the north bank of the canal.¹⁷⁸

In late March President Spates sent two communications to Brigadier General Benjamin S. Roberts, then in command of the Union troops along the canal, complaining that the Federals were not complying with McClellan's General Order No. 44 issued on April 21, 1862. In response, Roberts justified the military's activities on the grounds that the canal company was employing suspected "disloyalists" and that the waterway was being used to secret[e] supplies and information to the Confederates. His lengthy accusations were as follows:

On entering upon my duties...and before I issued my General Order No. 2, I was informed by many reliable persons that a large contraband trade was carried on between Maryland and Virginia and information constantly passing to the Confederate Army, by means of small boats and skiffs along the river and canal on the lines where trade with Virginia is forbidden by a recent law of Congress. In order to carry into effect that law and the regulations of the Treasury and War Dept. intended for that purpose, I deemed it a military necessity to seize the boats and other water craft as designated in Part IV of that order. It had been stated to me that many boats used in this contraband trade belonged to the Chesapeake & Ohio Canal Co. and were hidden away under culverts and bridges along the canal and river, and rented by the captains, and agents of the Company to speculate in this atrocious traffic and to give encouragement and carry supplies to Dis-

¹⁷⁵ Sanderlin, *The Great National Project*, 206–207, and Constance McLaughlin Green, *Washington Village and Capital, 1800–1878* (2 Vols., Princeton, 1962), Vol. I, 265.

¹⁷⁶ *Proceedings of the President and Board of Directors*, K, 325.

¹⁷⁷ *Ibid.*, 422.

¹⁷⁸ *Ordinances of the Corporation of Georgetown, from January, 1863, to January, 1864* (Washington, 1864), 25, 44–45. Later on January 9, 1864 an ordinance was passed changing the plan of the market-house to include a second story on the north end of the building. On February 20, 1864, a resolution was approved providing that a basement be constructed under the entire building. *Ordinances of the Corporation of Georgetown* (Washington, [1871]), 3–4, 15. The plans and specifications for the new market-house were approved on May 7, and a contract was let to John A. Rheem of Washington on June 4. Later on July 2, the plans for the basement were dropped. *Ibid.*, 30, 33, 39.

loyalists and Rebels in Virginia. It was my first duty, under the state of things as thus represented, to seize all and every kind of skiff or boat that could be taken by secessionists from their place of concealment by night or day by force, or that could be rented of unfaithful employees of the Company without its knowledge.

It was not of course my intention in any manner to interfere with proper commerce and trade along the canal, or to embarrass in any degree its lawful business, known to me to be of great importance to the Federal Government. But if the Company has in its employment agents or persons who disregard the laws of Congress and the regulations of the Treasury Department and the Army, it must suffer the consequences; as I cannot permit boats or skiffs to be kept within the lines of my command that can be used in any manner, with or without the assent of the Company or its agents, to aid the enemies of the Federal Government.

When the company was ready to repair the abutment of Dam No. 5, the commandant at North Mountain would release the boats captured near the dam to aid in the restoration work. However, it was hoped that the company would

consent willingly to any transient and slight inconveniences the exigencies of the crisis may impose on them. All truly loyal and good citizens are expected to make such sacrifices, and the more willingly, as they are intended for the permanent and great good of the public.¹⁷⁹

As the prospects for canal trade were greatly improve in the spring of 1863, the board received several petitions from parties at Cumberland and Hancock, urging an increase in the toll on coal of 1/8 of a cent per ton mile. The petitions argued that such a decision would increase the revenue of the company and enable it to improve its desperate financial condition. Moreover, the general inflationary tendency of prices during the war years had witnessed increased freight rates on the railroads and canals of the North, and, consequently, the Cumberland coal shippers would not be hurt.¹⁸⁰

On April 10, the canal board met to consider the two petitions. After some discussion, the directors approved the following resolution:

That in consequence of the interruption of trade and of injuries received by the canal within the two years last past, it is absolutely necessary to make a temporary increase in the rates of toll on coal; and upon full consideration, the said toll is hereby increased 1/16

¹⁷⁹ Roberts to Spates, March 28, 1863, in Spates Papers. According to Mary Mitchell in her study of Georgetown during the Civil War, the only underground activities carried out in that town were initiated by small local tradesmen, laborers and citizens of obscure origins. Her research in Old Capitol Prison records revealed that "time and again, drovers, brewers and boatmen, who gave Georgetown as their residence, were incarcerated for blockade running, smuggling and disloyalty, denied *habeas corpus*, and released only after the interrogation of the prison authorities had extracted all possible information from them." The most sensational case concerned a drug ring of apparently large proportions. The local anchorman was John Crumbaugh, a former cattle drover from Loudoun County, Virginia, who had been a butcher in the Georgetown market-house until 1861 when he purchased a wood and fuel business on the canal wharf at the foot of 33rd Street. He then bought a home on N Street and used its cellar as a way station between drug wholesalers, his canal boats, and a Virginia contact. In February 1863 he was caught with \$14,000 worth of quinine, morphine and nitrate of silver concealed in apple and potato crates. He was sent to the Old Capitol Prison and died there in 1864. Mary Mitchell, *Divided Town* (Barre, 1968), 122–123.

¹⁸⁰ Petitions, variously signed, to President and Directors, April 6, 1863, Ltrs. Recd., C & O Co.

of a cent (making 5/16 of a cent) per ton per mile, to take effect on all cargoes shipped on or after the first day of May next, and to continue to the first day of November next, after which date the rate will be 4/16 ct, of a ton per mile, as it now is.¹⁸¹

The rise in trade and canal revenue triggered a petition from a number of canal employees, asking for a general wage increase to compensate for the rising inflation of the war years. This request was tabled immediately by the directors as it would further drain the company finances at a time when they were attempting to place the operation of the waterway on a more firm footing.¹⁸²

Just as canal navigation was increasing, the canal company began to feel the effects of the Federal Draft Act that President Lincoln had signed on March 3. This, the first effective Federal draft, imposed liability on all male citizens between the ages of 20 and 45 with the exception of the physically or mentally unfit, men with certain types of dependents, those convicted of a felony, and various high federal and state officials. Draft quotas for each district would be set by the President on the basis of population and the number of men already in the service from each district. A drafted man could hire another as a substitute or purchase his way out for \$300.¹⁸³

In mid-April the canal board received word that two lock tenders, M. Burris and I. Edelin, had been drafted. As they were both poor men with large families, neither of them was financially able to procure a substitute. Accordingly, a canal official had loaned Edelin \$100 for that purpose, while Burris borrowed a similar sum. By this time, the company owed each man over \$200, and unless the board could do something soon, the men would "be compelled to dispose of their claims at a great sacrifice."¹⁸⁴

The quickened pace of trade activity during April and May 1863 produced a sense of optimism along the canal and local entrepreneurs quickly took steps to participate in the new-found prosperity. On April 19, Denton Jacques rented for 10 years at an annual fee of \$10 two parcels of land near Lock No. 49 about 100 by 125 feet on the berm side and 10 by 15 feet on the towpath side on which he intended to build several warehouses.¹⁸⁵ The firm of Bridges and Henderson, which had recently purchased the Round Top Cement Mill above Hancock, commenced negotiations in early May with canal officials to obtain free passage on the waterway to ship needed supplies between Hancock and the mill.¹⁸⁶ George Hill, Jr., obtained a 20-year lease on a large parcel of ground belonging to the company just west of the Potomac Aqueduct on which he planned to construct a mill. To run his new enterprise, he negotiated a 20-year lease for 200 inches of water power from the canal company.¹⁸⁷

At the same time, the improving trade gave rise to at least one proposal to provide the canal with an outlet to the Potomac just west of the Potomac Aqueduct and thus avoid the costly delays of boating through Georgetown. On May 7, T. S. Kidwell offered

to take the whole front of the Canal from Shoemakers Mill to within 200 feet of a right line drawn from the West line of the Aqueduct upon a lease reviewable forever, at \$500 per annum, with the privilege reserved to this Company [Chesapeake & Ohio] of dropping loaded boats from the Canal into the river by mechanical contrivances, at any point along said line.

¹⁸¹ *Proceedings of the President and Board of Directors*, K, 329–330.

¹⁸² Petitions, variously signed, to President and Directors, April 6, 1863, Ltrs. Recd., C & O Co.

¹⁸³ Long, *Civil War Day by Day*, 325.

¹⁸⁴ White to Board of Directors, April 10, 1863, Ltrs. Recd., C & O Co.

¹⁸⁵ *Proceedings of the President and Board of Directors*, K, 327.

¹⁸⁶ Hassett to Ringgold, May 4, 1863, Ltrs. Recd., C & O Co.

¹⁸⁷ *Proceedings of the President and Board of Directors*, K, 335–336.

After considering the proposal, the board determined that it was not "expedient or proper" to pursue the matter further at that time.¹⁸⁸

Despite the economic upturn along the canal, the directors continued to receive reports of the long-term ill effects of the previous two years of hostilities on the mills along the waterway. One such report arrived in early May from Jacob Miller who owned a sawmill near Sharpsburg. Soldiers had taken his mill on January 19, 1862, and had prevented his sawing until May 14. After that, the water was out of the canal from July 1 to 12, for nearly two weeks in August, and again from September 14 on. Following the Battle of Antietam, soldiers used the mill as a hospital and then as a pickets' rendezvous. When the soldiers moved out, they carried the doors, windows, partitions, garners, flooring, weatherboarding, chimney stove, and other movable things with them. Even his post and board fence had been cut down and burned. By then it was too late in the year to resume operation, even if the repair materials had been available.¹⁸⁹

On May 20, Captain E. S. Allen of the Quartermaster's Office informed the canal board that the tidelock at Georgetown was deteriorating and needed immediate repairs. Irked by the continued military occupation of the Rock Creek Basin, the directors authorized Clerk Ringgold to send the following cryptic reply:

they [the board] have given directions to the Superintendent to make the Lock effective as early as can be done, but inasmuch as it may require repairs beyond the available means of the Company, and as it is and has been used for sometime past almost exclusively for the United States, and the injury has arisen in some degree from their agents, and further that the U. States have made free use of the Canal, without payment of tolls, I would suggest whether it would not be proper that they should contribute to the repairs of the Lock in question.¹⁹⁰

At the 35th annual meeting of the company stockholders held on June 1, President Spates reported on the upsurge of canal trade in the spring of 1863. Since January 1, 83,396 tons of coal had been transported on the waterway, compared to 94,819 tons for the entire year of 1862. With the help of the rate increase in April, revenue from tolls for the first five months of 1863 was \$56,615.14, or nearly 90 percent of the \$63,985.85 that had been collected during the entire previous year. Although there was still a deficiency in the number of boats needed for the growing trade, it was thought that the rising freight rates would encourage boat-building. Already, there were a number of new boats being built in Cumberland.¹⁹¹

After frustrating two Federal attempts to penetrate the strong defensive positions at Fredericksburg and march on Richmond, the Confederates on June 3 again undertook a strategic offensive. This effort was designed to carry the war to the North and relieve pressure on Vicksburg and Chattanooga by making the Federals withdraw strength from those areas to counter Lee's threat to the rich Cumberland Valley. By June 8 Lee had concentrated most of his Army of Northern Virginia near Culpeper. During the northward movement of the Confederates, General Joseph Hooker, who had been named commander of the Army of the Potomac on January 26, ordered reconnaissance operations that resulted in the Battles of Franklin's Crossing on June 5 and Brandy Station on June 9. After the Rebels had driven Union troops out of their positions at Berryville and Martinsburg, the 9,000-man 2nd Division at Winchester was routed by Confederate

¹⁸⁸ *Ibid.*, K, 334.

¹⁸⁹ Miller to President and Directors, May 1, 1863, Ltr. Recd., C & O Co.; Ringgold to Benton, May 29, 1863, Ltrs. Sent, C & O Co.; and *Proceedings of the President and Board of Directors*, K, 324–325, 340.

¹⁹⁰ Ringgold to Allen, May 29, 1863. Ltrs. Recd., C & O Co.

¹⁹¹ *Thirty-Fifth Annual Report* (1863), 5.

infantry and cavalry on June 14. On the 15th, Southern troops under Major General R. E. Rhodes crossed the Potomac at Williamsport, and after a short skirmish, drove off the small defending force. The next day, while most of the men were resting, bathing, and washing their clothes, a fatigue party made attempts to blow up the Conococheague Aqueduct and wreck the other nearby canal structures. Three days later, on the 18th, the remainder of Lee's army crossed into Maryland at Boteler's Ford near Shepherdstown. After moving his army into Maryland, Lee concentrated it at Hagerstown, six miles from the Potomac and 74 from Harrisburg, Pennsylvania, his principal objective.¹⁹²

During the period in which the Army of Northern Virginia was proceeding northward, the canal was the scene of active military operations. At daybreak on June 10, some 250 Virginia cavalry under Major John S. Mosby crossed the Potomac at Muddy Branch to attack Company I, Sixth Michigan Cavalry, on duty near Lock No. 24. Dashing up the towpath, Mosby's Raiders drove in the patrols and chased the retreating Federals to within three miles of Poolesville. The Rebels quickly withdrew after capturing some 17 prisoners and 20 horses. After burning the Union tents, stores, and equipment at Seneca, they proceeded down the towpath and recrossed the river at Muddy Branch.¹⁹³

A daring raid was launched on the 17th by Lieutenant-Colonel Elijah V. White with 125 men against a small Federal company under Captain Samuel C. Means stationed at Point of Rocks. Crossing the river near Catoctin Creek, he sent a company of 70 men toward Frederick, while he took the remainder down the canal towpath, routed Means' company, and captured and burned three wagons and eighteen train cars. After cutting the telegraph wires and tearing up some railroad tracks, he recrossed the river with 53 of the 100 prisoners he had captured, all without the loss of any of his men.¹⁹⁴

A third raid was launched against the Cumberland Division of the canal between Paw Paw Tunnel and the "Narrows" several days before June 20. Although the only available information on the raid appears in a letter from Superintendent Lowe to Clerk Ringgold on that date, it is apparent that the Rebels intended to disrupt canal navigation. One or two lock gates were damaged, and the waterway was cut just below Lock No. 67 and between Locks No. 71 and 72 in a high embankment. Fortunately for the canal company, both breaches were made in slate material which did not wash easily. Thus, all the damage could be repaired in 10 working days with sufficient hands at a cost of about \$600.¹⁹⁵

After a series of engagements between Northern units and remnants of Lee's troops at Aldie, Middleburg, and Upperville in the Loudoun Valley, Lee ordered his main army to proceed from Hagerstown toward Pennsylvania on June 22. Upon learning of the Confederate movement, Hooker on the 25th directed his troops to cross the Potomac into Maryland at Edwards Ferry on a pontoon bridge, the materials for which had been brought up the canal from Washington. Using

¹⁹² O. R., Series I, Vol. XXVII, pt. 2, 549–550; Glenn Tucker, *High Tide at Gettysburg* (New York, 1958), 27–39; Clifford Dowdey, *Death of a Nation* (New York, 1958), 37–41; and Mark Mayo Boatner III, *The Civil War Dictionary* (New York, 1959), 331–332. At the time that the Confederates crossed the river at Shepherdstown, Major General Edward E. Johnson took up headquarters at Ferry Hill Plantation, the house being owned by the father of Henry Kyd Douglas who was a member of his staff. Wilbur Sturdevant Nye, *Here Come the Rebels!* (Baton Rouge, 1965), 147.

¹⁹³ O. R., Series I, Vol. XXVII, 786–788, and John S. Mosby, *Mosby's War Reminiscences - Stuart's Cavalry Campaigns* (New York, 1958), 158–162.

¹⁹⁴ O. R., Series I, Vol. XXVII, pt. 2, 768–771.

¹⁹⁵ Lowe to Ringgold, June 20, 1863, Ltrs. Recd., C&O Co.

the canal towpath and nearby roads, the Army of the Potomac had proceeded to Frederick by the 28th where it interposed itself between Lee's columns and Washington.¹⁹⁶

Meanwhile, General "Jeb" Stewart had commenced his famous Gettysburg Raid with three brigades on June 24 in an effort to circle around Hooker' rear and flank and connect with the Confederate columns marching toward Harrisburg. As the Potomac was two feet above its normal level on the night of June 27 when Stewart determined to cross the river at Rowser's Ford, a short distance below Dam No. 2, he ordered his caissons and limber chests to be emptied and his cavalrymen to carry the artillery shells and powder bags across in their arms. Then the guns and caissons were dragged into the water and, completely submerged at times, towed through nearly a mile of water to the Maryland shore below Seneca Creek.¹⁹⁷

Regarding the canal as of strategic value to Hooker, Stuart seized possession of the waterway from Lock No. 23 to the Seneca Aqueduct and ordered his lead company to establish vedettes beyond the canal. To facilitate the crossing of the waterway, a passing barge was commandeered and turned crosswise to serve as an improvised bridge. Twenty dismounted men crossed over to the berm side of the canal and established an outpost, while the remainder of the Rebel forces crossed the waterway over the pivot bridge at Lock No. 23, which the Federals had failed to destroy prior to pulling out of the area. During the night, twelve barges blundered into the vicinity and were promptly commandeered. All were carrying freight except two with loads of Union soldiers, both white and black, en route to Washington. The Confederates found a valuable supply of grain on the boats. The prisoners were marched off toward Rockville, eight miles to the northeast. Before proceeding to Rockville to interdict the main supply route and line of communications for the Union army, Stuart had nine of the canal boats burned both above and below the Seneca Aqueduct, including one in its trunk that damaged the wooden railing. The gates of Lock No. 23 and Guard Lock No. 2 were destroyed and the towpath embankment breached, thereby draining the Monocacy Division of water and causing the other three boats to sink.¹⁹⁸

On June 30, Superintendent Spates of the Monocacy Division reported that his jurisdiction was again in good boating order. The burned and sunken hulls at Seneca had been moved to one side of the canal and would be removed from the trunk as soon as possible. The lock gates had been replaced and the towpath embankment repaired. In addition, his crews had replaced the gates at Locks Nos.13 and 16 and the pivot bridges at Lock No. 13 and Great Falls, which had been destroyed by the Federals charged with guarding the line of the Potomac. The only remaining problem on his division was the pivot bridges at Lock No. 25 which the Army of the Potomac had used to cross the canal at Edwards Ferry on its way to Pennsylvania. The bridge had been damaged to the extent that it no longer turned on its pivot. Boats were passing in either direction between Seneca and Harpers Ferry in the employ of the federal government.¹⁹⁹

Following the momentous Battle of Gettysburg, July 1-3, the Confederates commenced a retreat toward Virginia. A severe storm made the Potomac unfordable when Lee's advance guard reached Williamsport on July 6. Here Union cavalry under Major General John Buford attacked

¹⁹⁶ Roger S. Cohen, "The Civil War in the Poolesville, Maryland, Area" (MD. Hist. Soc. MSS., 1961), 11.

¹⁹⁷ O. R., Series I, Vol. XXVII, pt. 2, 693, and Nye, *Here Come the Rebels*, 316.

¹⁹⁸ O. R., Series I, Vol. XXVII, pt. 2, 694; Nye, *Here Come the Rebels*, 316-317; Jane Chinn Sween, "A History of Dawsonville and Seneca, Montgomery County, Maryland," (Md. Hist. Soc. MSS., 1967), 70-71; and Spates to President and Directors, June 30, 1863, Ltrs. Recd., C & O Co. Although C. E. Detmold, the owner of four of the boats that were burned, later requested that he be relieved from the payment of tolls, the board on January 23, 1864, determined that the "payment of tolls be required on the cargoes of all boats to the points where such cargoes were transported and destroyed." *Proceedings of the President and Board of Directors*, K, 366.

¹⁹⁹ Spates to President and Directors, June 30, 1863, Ltrs. Recd., C & O Co.

the Rebel force under Brigadier General John Daniel Imboden but were repulsed.²⁰⁰ The rest of Lee's army reached Hagerstown on July 7 and entrenched to await replacement of the pontoon bridge at Falling Waters that had been destroyed by Federal cavalry. Confederate engineers quickly began taking canal boats and pieces of houses and lumber to reconstruct the bridges. Following several more skirmishes between Union cavalry and the retreating Rebels in the vicinity of McCoy's Ferry, Clear Spring, and Williamsport on the 8th and the 10th, Lee determined to commence the river crossing before the pontoon bridges were completed as the level of the Potomac had receded to a fordable level. On the 10th, small Rebel contingents began crossing the river in canal boats and hastily-constructed hulls "at the rate of three teams an hour," but the bulk of Lee's army withdrew across the river on the night of July 13-14 over the pontoon bridge that had been finished that morning.²⁰¹ During the crossing, Major General Henry Heth staged a rear-guard action at Falling Waters in which he lost two guns and 500 prisoners to the advancing Federals.²⁰² With the entire Confederate force on the Virginia side of the river by the early afternoon of the 14th, the pontoon bridge was cut loose to allow the river's current to carry it downstream and dash it against the banks. That same afternoon, the Northern army crossed the river into Virginia over a pontoon bridge thrown across the Potomac at Harper's Ferry.²⁰³

After both armies had crossed back into Virginia, canal officials surveyed the condition of the waterway and commenced plans for the restoration of navigation. Superintendent Masters informed canal officials on July 19 that the damage wrought by the Confederates and the late rains on his Williamsport Division would require three weeks of repairs before navigation could be restored.²⁰⁴ Henry S. Miller, the collector at Williamsport, reported on July 22 that he was forwarding the toll permits that he had received for the month of June:

The cause of delay in these permits was an anxiety to have them there in good season - hence when the Rebels came into our place, I gave my permits to a man from our country, who expected to reach Washington, but was arrested, yet was successful in concealing my papers. He has just returned & I hasten them on. Please send me black waybills & return sheets. The Rebs tore in pieces every paper they could find about my office, but, I had all books and papers of importance concealed. We expect to see the boats running in about 2 weeks if the Johnny Rebs do not return. This morning we see their pickets again on the opposite side of the river. I am fearful we are not entirely clear here yet.²⁰⁵

After traveling down the canal from Cumberland to Williamsport, Greene observed on July 25 that navigation had been restored as far down the waterway as Dam No. 5. Provided the Rebel pickets did not reappear on the Virginia shore, the Williamsport Division might be reopened as early as August 1. For more than a week, repair crews had been at work removing sandbars mending the towpath, and patching the Conococheague Aqueduct. He remarked that "It is really wonderful that a month's hostile occupancy of the canal should have resulted in as little damage" for he had heard that the Antietam Division was unharmed. Thus, he was "charmed with the appearance of the work" and was encouraged that the Rebel pickets had disappeared. The one bad break on the Cumberland Division had been repaired, and he was pleased to note that a local farmer had prevented another by cutting a waste weir.²⁰⁶

²⁰⁰ O. R., Series I, Vol. XXVII, pt. 2, 299, 433-436.

²⁰¹ *Ibid.* 275, 280, 301-303.

²⁰² *Ibid.* 639-642.

²⁰³ *Ibid.* 301, and J. Warren Gilbert, *The Blue and the Gray* ([Gettysburg], 1922), 121.

²⁰⁴ Masters to Ringgold, July 19, 1863, Ltrs. Recd., C & O Co.

²⁰⁵ Miller to Ringgold, July 22, 1863, Ltrs. Recd., C & O Co.

²⁰⁶ Greene to Ringgold, July 25, 1863, Ltrs. Recd., C & O Co.

Because of his full-scale operations to repair the Williamsport Division, Superintendent Masters did not submit a full report to the board until August 4. The chief damage to his division had occurred at the Conococheague Aqueduct where the Rebels had torn "down to the bottom of the canal the 4 corners" of the structure—an "aggregate space of 74 feet." All the coping and railings had been thrown into the creek and partially destroyed. A hole had been made in one of the arches "nearly the width of the aqueduct & 6 or 10 feet wide." The four gates at Lock No. 44 were burned, and the two upper courses of the lock walls had been torn up and thrown into the chamber. Four roads had been made through the canal banks on the division through which the Confederate troops had passed. The aqueduct would be rebuilt "with masonry as high as the water mark or as far as the stone on hand." The repairs would be completed by August 8 at a total cost of nearly \$5,000.²⁰⁷

Despite the resumption of navigation in the second week of August 1863, the operation of the waterway was disrupted repeatedly by Rebel guerilla raids in which large numbers of mules and quantities of provisions were stolen from the boatmen. A bitter Greene complained to Clerk Ringgold on September 2 that "the canal is again practically closed by the neglect of the Government to afford the boatmen protection." As a result, numerous boats which arrived at Cumberland were refusing "to load and tie up their boat being unwilling and, in fact, unable to risk the loss of, in many cases, everything they have." Although the military authorities had promised to "secure" the canal, a large number of boats "have since been disabled by the loss of their teams and have stopped." He concluded his remarks by observing:

I think it would meet the unanimous approbation of this whole community [Cumberland] if Mosby or White or whoever leads these incursions should ride into Washington some fine night and carry off with them to parts unknown, Gen. Halleck, Sec. Stanton, and everybody else whose duty it was to prevent these shameful raids - - even for their own sakes. If we could only have some heavy rains to raise the river enough to render it unfordable, we might hope to do some business, but our old-fashioned drought is upon us with no prospect of a let-up until winter.²⁰⁸

During the month of August, President Spates sent at least four letters to various Union commanders, complaining that the Federal troops along the canal were not effectively protecting it from the Rebel raids and were, in fact, hindering navigation by seizing horses and mules from the boatmen and damaging canal company property. As a result of the correspondence, additional cavalry units were sent from Washington in late August to guard the canal between Georgetown and the Monocacy River, and the commanders at Harpers Ferry and Hagerstown were ordered to have their troops secure the line of the canal in their areas. Copies of General Orders No. 44, which had been issued on April 21, 1862, were sent to all the officers stationed along the river with instructions not to interfere with navigation on the waterway.²⁰⁹

On September 1, the military authorities arrested a number of Marylanders and confined them at Fort McHenry, charged with having communicated with the enemy or having provided information to the Rebel forces during the Gettysburg campaign. Among those incarcerated were President Spates and William Broun, the contractor building the Virginia abutment at the new masonry Dam No. 5. In the case of Spates, the reason for his confinement was a boast that he had visited General Lee during the campaign. William H. Hoffman, to whom the conversation was

²⁰⁷ Masters to President and Directors, August 4, 1863, Ltrs. Recd., C & O Co.

²⁰⁸ Greene to Ringgold, September 2, 1863, Ltrs. Recd., C & O Co.

²⁰⁹ Hentzelman to Spates, August 13, 22, 1863, Tucker to Spates, August 24, 1863, and Freeman to Spates, August 31, 1863, Spates Papers.

addressed, had passed the information to the military authorities. The men were to be held at the prison facility in Baltimore pending their appearance before a military tribunal on the charges of disloyalty.²¹⁰

The canal board on September 10 appointed Lawrence Brengle as company president *ad interim* during the confinement of Spates. At the same time, Brengle and Director Joseph H. Bradley were ordered to proceed to Baltimore in an effort to procure the release of Spates and Broun.²¹¹

On the 15th, Brengle informed Ringgold concerning the results of the visit to Ft. McHenry. During a conversation with Spates, the confined president had acknowledged that he, in company with Davis Raman, had visited the headquarters of General Lee at Hagerstown during the recent campaign. However, he had not conversed with Lee but with Charles Marshall, one of the General's aides with whom he had been "intimate" in Baltimore before the outbreak of the war.²¹² His visit to Marshall had been made so as to prevent his arrest by Confederate soldiers as he passed along the waterway and "to secure the interest of the canal as far as possible." Because the two canal representatives were unable to affect the release of Spates, Director Bradley intended to meet with Secretary Stanton, who was considered to be more sympathetic to the case. Although the charges against Spates were not conclusive, his enemies along the canal were "striving to keep him in the Fort." The charges against Broun were only rumors, and his release was expected within several days.²¹³

Spates was still confined at Fort McHenry on September 24, when the board received a letter from him urging the adoption of certain measures to serve the interests of the company.²¹⁴ Sometime after that date, he was transferred to the prison at Fort Lafayette in New York. Finally on January 25, 1864, after further intercession on his behalf by company officials, he was released by special order from Secretary Stanton.²¹⁵

Despite the uncertainties caused by Rebel raids and the disarray in the canal leadership, business on the waterway continued to improve after its reopening in mid-August. Evidence of the resurgence of trade was manifested by the new enterprises that were commenced along the line. On September 24, Mortimer Osborn was granted permission to install a counter and shelves in a room of Lockhouse No. 30 for the purpose of selling dry goods and groceries to the passing boatmen.²¹⁶ On the same day, George W. Case, the tender at Locks Nos. 19-20, was authorized to establish a tavern at Crommelin House.²¹⁷ When it was discovered that the company did not own the tract of land adjoining the Potomac Aqueduct that had been rented earlier to George Hill, Jr.,

²¹⁰ Fickey to Ringgold, September 1, 3, 1863, Ltrs. Recd., C & O Co.; Washington *Evening Star*, September 2, 1863; and Stake to Brengle, September 17, 1863, Ltrs. Recd. C & O Co. This was the second time that Spates was placed under arrest for disloyalty. Although no information could be found concerning his first arrest, it is presumed that it occurred in the aftermath of the Antietam Campaign in 1862.

²¹¹ *Proceedings of the President and Board of Directors*, K, 349-350, and Middletown *Valley Register*, September 18, 1863.

²¹² Spates was a native of Montgomery County, having owned a 287-acre farm, which he called "Contention," along the old road between Washington and Rockville. By 1846 he was living in Baltimore, where he remained until 1853 when he moved to Cumberland to assume the position of Deputy Clerk of the Circuit Court of Allegany County, Cumberland *Alleganian*, June 24, 1876; Cumberland *Daily News*, June 24, 1876; Rockville *Advocate*, June 29, 1876; Rockville *Sentinel*, June 30, 1876; Baltimore *Gazette*, June 28, 1876; Cumberland *Civilian*, June 25, 1876; Card, Lodge No. 48, Independent Order of the Odd Fellows, February 1, 1853; and "Alfred Spates Qualification as Deputy Clerk," March 11, 1853, in Spates Papers.

²¹³ Brengle to Ringgold, September 15, 1863, Ltrs. Recd., C & O Co.

²¹⁴ *Proceedings of the President and Board of Directors*, K, 351.

²¹⁵ Greene to Ringgold, January 25, 1864, Ltrs. Recd., C & O Co.

²¹⁶ *Proceedings of the President and Board of Directors*, K, 351.

²¹⁷ *Ibid.*, K, 352.

the company executed a 20-year lease for 200 inches of water power with him for use at his mill located at the corner of Potomac and Water streets in Georgetown which would soon commence operation.²¹⁸ On December 17, Daniel L. White was granted permission to construct a storehouse on the berm side of the canal at Conrad's Ferry.²¹⁹

During this period, the canal company continued to face the problem of inefficiency on the part of some of its division superintendents and of disloyalty charges against others. On September 14, Horace Benton, who had allowed the Georgetown Division to deteriorate, was fired and replaced by John Cameron, a long-time company employee.²²⁰ Later on December 17, the board received an anonymous note charging Superintendent George W. Spates of the Monocacy Division with disloyalty and recommending Alex Dent as his replacement. Although generally dissatisfied with the performance of Spates, the directors took no action on the communication.²²¹

All told, the year 1863 witnessed a tremendous revival in the overall Cumberland coal trade as its aggregate production increased to more than 748,000 tons, only a little less than the amount shipped in 1860 and 430,000 tons more than was shipped in 1862. One of the reasons for the increased orders in the Maryland field was that the Broad Top mines were closed for three months in 1863 as the result of the Gettysburg Campaign and a two-month miners' strike.²²²

The canal shared in the revival of trade as the total tonnage carried on the waterway soared to 265,847 tons, a sum that nearly equaled the combined tonnages of 1861 and 1862. The coal tonnage rose to 229,416 tons, more than double the 94,819 tons that had been transported in 1862. The tolls received from the trade increased to \$154,928.26, compared with the sum of \$134,552.84 collected during the previous two years combined.²²³

In June 1864 the stockholders were informed about the progress of canal trade during 1863 as follows:

The business of the Canal for the past year has been much better than that of the two preceding years; there was less interruption to the trade from military movements and other casualties to which it had been subjected, but for the invasion of June last, which in a great measure suspended business for two months of the most active period of the year, the revenues of the Company would have exceeded those of any former year.

The damages sustained by this invasion required an expenditure of about \$15,000 to restore the navigation and the loss of revenue for two months, which would probably have been not less than \$50,000. With this exception there was but little interruption to the navigation during the season of business which commenced about the 15th of March and continued till near the end of December.²²⁴

²¹⁸ *Ibid*, K, 358, and Ringgold to Hill, November 27, 1863, Ltrs. Sent, C & O Co.

²¹⁹ *Proceedings of the President and Board of Directors*, K, 361.

²²⁰ *Ibid*, K, 349.

²²¹ *Ibid*, K, 361.

²²² Harvey, "Civil War and Maryland Coal Trade", 371.

²²³ Sanderlin, *The Great National Project*, 307.

²²⁴ *Thirty-Sixth Annual Report* (1864), C & O Co., 3.

V. THE CANAL TRADE EXPANSION CONTINUES: 1864

The canal was closed by ice from late December 1863 to early February 1864. At that time, the water was withdrawn to remove obstructions in the prism and make repairs in the banks and masonry structures along the waterway. Navigation was to resume in early March, and the canal board looked forward to even a more prosperous year than the previous one.²²⁵

While the repairs were underway, the canal board confronted a number of issues that were symptomatic of the greatly expanding commerce on the waterway. On February 18, Edward M. Linthicum, a long-time prominent Georgetown merchant, submitted a proposal to the directors for the construction of an inclined plane just west of the Potomac Aqueduct "to pass boats from the canal to the river." Such a structure would alleviate the growing congestion of the traffic through Georgetown and in the Rock Creek Basin. The board was interested in the idea and determined to visit the Morris Canal in New Jersey in April to observe the world-famous inclined planes operating on that canal. The clerk and the treasurer were directed to procure a topographical survey plat of the company land on the river side of the canal between the aqueduct and the Foundry property.²²⁶

On April 14, President Spates, together with Directors Albert, Brengle, and Watson and the Maryland Commissioners of Public Works proceeded to Newark, New Jersey. Here they were met by W. H. Talcott, the engineer in charge of the works on the Morris Canal who gave them a tour of the canal and a "verbal explanation" of the operation of the inclined planes. Greatly impressed by what they saw, the directors returned to Washington very enthusiastic about the construction of an inclined plane above Georgetown. However, the uncertainties of the war and a shortage of expendable cash prevented the immediate building of the plane.²²⁷

The canal board determined on February 18 to terminate the leases of those parties renting company land west of the tidelock and tumbling dam at the mouth of Rock Creek. The company was anxious to reacquire use of this land so that it could be relet to interests who would install improvements for the transfer of coal to river boats. The current tenants, William H. Godey, Walter Godey, Solomon Stover, Dickson & King, and J. L. Sims, were notified that they were to vacate the property by March 31. At a public meeting on March 15, the property was advertised for new one-year rentals to begin April 1. All the lots were rented to M. P. McPherson, an agent of Edward Mayer of New York, for an annual sum of \$3,760. As he intended to erect the necessary improvements to facilitate the transfer of coal to river boats, the board quickly extended the one-year agreement on the condition that the new operation would be a successful venture. As the current tenants possessed leases to the properties that had not expired, they refused to relinquish their claims to the land. Unable to force the tenants off the lots, the board on April 11 resorted to negotiating equitable arrangements with the lessees in order to turn possession of the property over to the Mayer coal interests as early as possible.²²⁸

As the boating season approached, the board received more applications for the construction of feed stores and warehouses along the canal to accommodate the growing trade. On February 18 the directors forwarded to Superintendent Spates of the Monocacy Division three such requests from M. E. Alexander, L. Roderick, and George P. Ramsberg to build structures near Lock No. 29. Upon the recommendation of Spates, M. E. Alexander was granted permission on March

²²⁵ *Thirty-Sixth Annual Report 1864*), 6.

²²⁶ *Proceedings of the President and Board of Directors*, K, 370–371.

²²⁷ *Ibid.*, K, 379. On September 8, 1864, the board paid \$75 to W. C. Smith, a civil engineer, for conducting a survey and drawing plans for the outlet locks to be built at the same location as the proposed site of the inclined planes. *Ibid.*, K, 398. Ultimately, the controversy would be settled in the early 1870s when it was determined to build the Georgetown Incline Plane.

²²⁸ *Ibid.*, K, 369, 376–378, 381–382.

24 to build a store house on the canal berm near the lock to sell feed and provisions to the boatmen. At the same time, George P. Ramsberg was authorized to build a warehouse on the company land on the canal berm in the vicinity of the lock.²²⁹

Although the canal was reopened to navigation in early March, little trade passes down the waterway for several weeks. On March 14 Superintendent Lloyd Lowe of the Cumberland Division reported:

The canal has been navigable ten days. No boats been loaded. Two or three that was loaded last December has started down. The Boatmen are holding back for an increase on freight. They are having trouble to get hands. I found it necessary last month to advance the pay of Laborers, and will have to continue it to obtain old hands...²³⁰

Three days later the Washington *National Republican* published an article that elaborated on the labor unrest as follows:

nearly all the miners and boatmen have struck for higher wages. The company [Cumberland Coal and Iron Company] refuse to accede to these demands from the fact that to do so would necessarily carry up the price of coal to such a high rate that there would be comparatively little demand for it, especially when brought in competition with a superior coal selling at about the same price. There is very little coal at the mines now, hence this strike is the more unfortunate. If the miners insist upon their demand for increased wages, it is said that the company will discharge the hands and employ others. In such an event, resistance is threatened, but as some of Gen. Sigel's forces are near at hand, it will not amount to much.²³¹

The strike was short-lived for on March 18 Greene wrote from Cumberland that

We shall have a season of great trouble, I fear, in our business. The boatmen have gone to work at two dolls freight 'for the present.' I do not doubt they will make a demand for more, later in the season. The miners are concocting a strike for \$.25 a ton additional! So we go. These demands cannot be granted and I have hardly a hope of avoiding serious suspension of business.²³²

Shortly after commencement of navigation, the board on March 24 took further steps to facilitate the growing coal trade. On that date Edward Lynch proposed to erect a platform and two derricks on the towpath near the Foundry above Georgetown that were to be used for loading and unloading coal. As the structure would eliminate some of the congestion in Georgetown, the board quickly approved the idea. To make room for the new facility, it was decided to change the towpath by passing it from the south side under the canal trunk, through the culvert above the Foundry and on to the road on the north bank. The road was to be repaired and made secure, and a 3-to-4-foot high post & rail fence was to be built along the wall of the north side of the waterway.²³³

²²⁹ *Ibid*, K, 370, 373-374.

²³⁰ Lowe to Ringgold, March 14, 1864, Ltrs. Recd., C & O Co.

²³¹ Washington *National Republican*, March 17, 1864, quoted in Harvey, "Civil War and Maryland Coal Trade," 372-373.

²³² Greene to Ringgold, March 18, 1864, Ltrs. Recd., C & O Co.

²³³ *Proceedings of the President and Board of Directors*, K, 374-375, 387.

The canal was in full operation by late March with fifteen to twenty boats leaving Cumberland every day. However, repairs on the towpath and other structures were still underway. Included in the repairs were the replacement of the gates at Lock No. 72 and the substitution of a causeway for the bridge across the canal opposite the mouth of Patterson Creek, both of which had been burned by Confederate cavalry raiders under Brigadier General Thomas L. Rosser during a sweep of the Patterson Valley in January and February.²³⁴ Among other projects, the company carpenters were put to work building new gates for use in case of an emergency. Because of the war, labor for the work crews was scarce throughout the Potomac Valley, particularly in Montgomery County. The maintenance of the waterway was hindered also by the government's use of some of its scows for the purpose of "moving and building block houses at the different fords on the river in order that the canal may be strongly-guarded this coming season." Company officials continued to face the demands of its employees for higher wages as a result of the wartime inflation.²³⁵

Heavy rains in scattered parts of the Potomac Valley in early April caused some flood damage to the canal, particularly on the Monocacy and Williamsport Divisions. On the former, a heavy earth and rock slide occurred near the Marble Quarry about one mile below Lock No. 26. The level was drained and the rock blasted into powder and removed with wheelbarrows. Although the high water had covered most of the towpath from Seneca Creek to Lock No. 26, the canal banks were not washed badly. As a number of lock gates and balance beams had been broken, a large quantity of timber was purchased at Orleans and Harpers Ferry with which to build replacements. Since the damage was generally light, the division was reopened for boat traffic within a week.²³⁶

On the Williamsport Division the only damage suffered by the canal was the number of sand bars washed into the trunk by the flood waters. Although the high water had covered the towpath on the slackwater behind Dam No. 4 for an unheard-of 15 days, the banks had not been washed significantly. Accordingly, the division was ready for navigation within five days.²³⁷

The board made two significant decisions on April 15 that reflected the rising inflation of the period. After May 1 the toll on the coal would be increased from 5/16 to 3/8 of a cent a ton per mile.²³⁸ At the same time, a new set of wage increases for the company employees would take effect. The pay raises would be as follows:

Collector of Tolls, Georgetown	\$900 (annual)
Division Superintendents	\$1,000 (annual)
Lock-Keeper at Locks Nos. 6–62, 67–72, 75	Present pay plus \$5 per mo.
Lock-Keeper at Locks Nos. 63 1/3–66	\$600 (annual)
Lock-Keeper at Locks Nos. 73–74	\$500 (annual)
Lock-Keeper at Guard Lock No. 8	\$400 (annual)
Repair Crew Bosses	\$45 (monthly) ²³⁹

The increasing trade on the canal during the spring of 1864 was reflected in the growing number of business activities along the waterway. The old Robinson Mill in Georgetown, which had been closed because of the war-induced cutbacks in demand, was purchased in early April by Benja-

²³⁴ Lowe to Ringgold, February 3, March 24, 1864, Ltrs. Recd., C & O Co.

²³⁵ Spates to President and Directors, March 31, 1864, Ltrs. Recd., C & O Co.

²³⁶ Spates to A. Spates, April 16, 19, 1864, Ltrs. Recd., C & O Co.

²³⁷ Masters to Ringgold, April 13, 1864, Ltrs. Recd., C & O Co.

²³⁸ *Proceedings of the President and Board of Directors*, K, 382.

²³⁹ *Ibid.*, K, 383.

min Darby and George Shoemaker, Jr., and quickly put back into operation.²⁴⁰ On May 12 the firm of McVeirs and Jones was granted permission to erect a store on the berm side of the canal at Edwards Ferry to sell groceries and feed to the passing boatmen.²⁴¹ That same day the board responded to the inquiry of J. Phillip Roman by authorizing him to build a steam packet and to commence passenger service on the waterway. As an inducement for such an undertaking, the directors agreed to permit the boat to navigate the canal free of tolls and to pay him an annual sum of \$200 as long as the vessel was well-maintained.²⁴² To aid in the repair of the growing number of boats on the waterway, John Ellis was permitted on June 2 to commence construction of a dry dock above Lock No. 14.²⁴³

The canal company stockholders were informed at their annual meeting on June 6 that navigation on the waterway was proceeding at a brisk pace. Although there had been brief interruptions from high water in April, no material injuries had been inflicted on the canal by the frequent and unusual rising of the river during the spring. The rising price of coal in 1863–64 had allowed the company to raise its toll on that product. It was believed that the

advanced rates will not injuriously affect the coal interest, will materially increase the revenues of the Company, enable them to keep the Canal in good condition, make permanent improvements upon it, insure to a greater extent than heretofore, uninterrupted navigation, and to materially reduce during the present year, pressing and meritorious pecuniary obligations, which have been an incubus upon its revenues, and greatly restricted essential improvements during the past three years.

Many new boats had been built during the past year, and it was predicted that the higher coal prices would encourage the construction of more vessels. Up until May 31, 101,390 tons of coal had been shipped on the waterway, producing \$74,988.58 in toll receipts.²⁴⁴

During the month of July, more requests from local valley residents reached the canal board, asking for permission to build warehouses and grocery and feed stores along the waterway to take advantage of the increasing commerce passing over the line. On July 7 Greenbury Foot was authorized to build a feed store near Lock No. 28.²⁴⁵ That same day a request from Daniel F. Roderick to construct a grain warehouse near Lock No. 29 was referred to Superintendent Spates for comment.²⁴⁶ Later on the 28th, another proposal from Charles F. Elgin to build a warehouse at Edwards Ferry for shipping granite from the nearby quarry was submitted to Spates for a recommendation.²⁴⁷

Before any action could be taken on these proposals, the canal again became the scene of active military activities. In late June, Lieutenant General Jubal A. Early was sent to clear Union forces from the Shenandoah Valley. Having accomplished this objective, Early, with 14,000 men, was directed to cross the Potomac and march toward Washington in an effort to relieve the Northern siege of Petersburg, rail head of the roads leading to Richmond and an important industrial center of the waning Confederacy, begun on June 19.²⁴⁸ He was also to destroy the canal and the Baltimore & Ohio Railroad..

²⁴⁰ *Ibid*, K, 375, 380–381.

²⁴¹ *Ibid*, K, 380, 385.

²⁴² *Ibid*, K, 387.

²⁴³ *Ibid*, K, 391.

²⁴⁴ *Thirty-Sixth Annual Report* (1864), 5–6.

²⁴⁵ *Proceedings of the President and Board of Directors*, K, 393.

²⁴⁶ *Ibid*.

²⁴⁷ *Ibid*.

²⁴⁸ Frank E. Vandiver, *Jubal's Raid: General Early's Famous Attack on Washington in 1864* (New York,

At the same time that Early was preparing to cross into Maryland, a band of guerrillas under Mosby forded the river near Lock No. 28, about one mile above Point of Rocks, on July 4. At the lock, the Confederates attacked a canal excursion boat with a number of Treasury Department officials aboard who were traveling from Harpers Ferry to Washington. All valuables were taken, several passengers were taken prisoner, and the boat was set on fire. The Rebels proceeded to Point of Rocks where they took many private possessions, burned a warehouse, robbed several stores, and burned military equipment left behind by a retreating Federal detachment. After raiding Poolesville where they committed further depredations, the raiders recrossed the river below Point of Rocks.²⁴⁹

Early reached the vicinity of the Potomac River near Harpers Ferry on July 4 and prepared to cross into Maryland. Fighting broke out at South Branch Bridge, Patterson's Creek Bridge, and Frankford, West Virginia, and a portion of the Confederate cavalry occupied Shepherdstown. As they retreated before the Rebels, Union troops under Major General Franz Sigel burned the bridge at Lock No. 38.

During the night of the 4th, the Union forces evacuated Harpers Ferry and took position on Maryland Heights after burning the railroad and pontoon bridges across the river. After finding Harpers Ferry too difficult to take because of the Northern guns commanding the town from Maryland Heights, Early began crossing the Potomac into Maryland at Boteler's Ford near Shepherdstown on the 5th. As a result, skirmishes were fought at Keedysville, Noland's Ferry, Point of Rocks, and Solomon's Gap. A portion of his men were sent to encamp near Antietam Furnace from where working parties were dispatched to destroy the Antietam Aqueduct and the nearby canal locks and burn as many boats as possible during the night. Early himself participated in the burning of several canal barges near the aqueduct.²⁵⁰ On the 6th, Early's Confederates captured Hagerstown and skirmished at Sir John's Run and Big Cacapon Bridge, West Virginia, and Antietam Creek, Maryland. The following day saw fighting at Middletown, Brownsville, and Catoctin. After encounters at Antietam, Frederick and Sandy Hook on the 8th, miscellaneous Federal units gathered under Major General Lew Wallace in an effort to halt the move on Washington. On the 9th, 6,000 bluecoats stood directly in the way of the Confederate advance on Washington. Early's 10,000 infantry moved toward the Monocacy River several miles southeast of Frederick. After a stiff fight, the Federals were routed and the way to Washington was clear. Skirmishes took place at Rockville and Gunpowder Bridge on the 10th. The Confederates reached Silver Spring the following day, and fighting ensued in the Northern outskirts of the Northern capital, particularly at Fort Stevens. Seeing Federal troops moving into the massive fortifications of the city, Early commenced a withdrawal toward the Potomac on the 13th, and after several fire fights at Rockville and Poolesville he crossed his infantry and artillery at Conrad's Ferry and his cavalry at Edwards Ferry. To delay pursuit, the Confederate rear guard burned the towpath bridge across the Edwards Ferry River Locks.²⁵¹

During the 10-day period that Early was advancing on Washington, a number of Confederate raiding parties were sent out to wreak as much havoc against the canal as possible. As a result, lock gates, bridges, and canal boats were burned in addition to the extensive damage to the Antietam Aqueduct. The principal damage to the canal occurred on the Monocacy, Antietam, and

1960), 59–88.

²⁴⁹ Mantz to Smith, July 5, 1864, in William E. Bain, ed., *B & O in the Civil War from the Papers of Wm. Prescott Smith* (Denver, 1966), 99–100.

²⁵⁰ *Ibid.* 88, and Frank E. Vandiver, ed., *War Memories: Jubal Anderson Early* (Bloomington, 1960), 383–385.

²⁵¹ *A Memoir of the Last Year of the War for Independence in the Confederate States of America* (Lynchburg, 1867), 54–62; Long, *Civil War Day by Day*, pp.533–539; O. R., Series I, Vol. XXXVII, pt. 1, pp. 169–358; and Vandiver, *Jubal's Raid*, 89–121, 148–174.

Williamsport Divisions, while no injuries to canal structures were reported between Georgetown and Seneca and between South Branch and Hancock.²⁵²

On the Monocacy Division, the damage was concentrated on the portion of the line between Locks Nos. 24 and 29. The gates of Lock No. 24 were destroyed, while those at Lock No. 25 were "thrown down, [the] beams cut off, [and] one gate cut in two." The bridge at the Edwards Ferry River Locks was burned and thrown into the waterway. The gates at Lock No. 26, near White's Ford where Early's troops had crossed the river back into Virginia, were thrown down and burned. One of the lock chamber's walls was torn down for some 30 feet in length and from 2 to 4 feet in depth. The gates of Lock No. 29 were taken down and cut. None of the other masonry structures on the division were damaged, but many tools and wheelbarrows had been taken. Two boats had been burned—the packet *Flying Cloud* and the new ice breaker scow. Attempts had been made to burn the repair crew's houseboat, but Mrs. Null, the cook, had defended it successfully. A large force of laborers, carpenters, and masons was soon at work on the repairs, and it was expected that the division would be ready for navigation by August 1.²⁵³

The Antietam Division suffered considerable damage. Four lock gates and between 35 and 41 canal boats were burned. The most critical damage occurred at the Antietam Aqueduct where most of the masonry on the berm and towpath parapets was destroyed. A portion of two of the arches was also torn out. As the entire countryside was in such a state of panic, workers, particularly masons were difficult to find until the end of July. Finally, on the 28th, the directors ordered Superintendent John Cameron of the Georgetown Division to proceed to the aqueduct "as early as practicable" to superintend the repairs.²⁵⁴

Considerably less injury was inflicted on the Williamsport Division. Nine boats, one of which was loaded, were burned, and six lock gates were cut at the heel posts. The railing was torn off the Conococheague Aqueduct, and the lock shanty at Williamsport was burned. The small bridge at Four Locks was also destroyed. While none of the damage was critical enough to interrupt travel for more than several days, the leaks in Dam No. 5, coupled with a summer drought, were so serious that the water on the division was too shallow to pass loaded barges. The repair crews had scattered during the raids, so it would be some time before the cam could be tightened.²⁵⁵

The Cumberland Division received some damage, primarily in the vicinity of Lock No. 68. The bridge over the lock was burned, and the, masonry and gates partially damaged. Fourteen boats were captured in the vicinity of the lock and after the horses and mules were unhitched, the craft, most of which were loaded with coal, were set on fire. The Patterson Creek railroad bridge was burned as was the temporary bridge over the canal at that point. Even more serious to the operation of this division was the continuing drought which prevented the passage of boats drawing more than four feet of water.²⁵⁶

The Confederate raids had a devastating impact on canal trade and the economic fortunes of the towns along its line. Aware of what damage guerillas could do to their mule teams and boats, the boatmen at Georgetown balked at leaving the security of the town. From the Potomac Aqueduct west to Chain Bridge, their barges formed a solid chain. With no grain the mills were

²⁵² Washington *National Intelligencer*, July 15, 1864.

²⁵³ Spates to Ringgold, July 16, 1864, and Spates to President and Directors, July 25, 1864, Ltrs. Recd., C & O Co. Also see John S. Mosby, *Mosby and His Men* (New York, 1867), 210–223.

²⁵⁴ Benton to Ringgold, July 20, 1864, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, K, 392–393.

²⁵⁵ Masters to Ringgold and Miller to Ringgold, July 18, 1864, Ltrs. Recd., C & O Co.

²⁵⁶ Lowe to Ringgold, July 25, 1864, Ltrs. Recd., C & O Co.

closed, and with no coal or flour the coasting vessels were idled. It was reported that "George-town was like Sunday on Tuesday."²⁵⁷

In view of the needed repairs and the rising price of coal, the board on July 25 ordered an increase in the toll on that product. The rate, which was to take effect on August 1, would be raised from 3/8 of a cent to ½ cent a ton per mile.²⁵⁸

The directors also became embroiled in a controversy with the Treasury Department at this time over the payment of a 2½ percent federal tax on the gross receipts of the revenues of the company. Congress had passed a bill on June 30 imposing such a tax on canals and other corporations to help finance the war effort. In July and August, canal officials resisted the claim, insisting that by Section 9 of the Act of the General Assembly of the State of Virginia incorporating the canal which was approved by Section 1 of the Act of Congress on March 3, 1825, the waterway was tax exempt. Refuting such an allegation, Assistant Assessor R. B. Ferguson informed Clerk Ringgold on August 27:

Section 9 of the act of incorporation by the General Assembly of Virginia declares that said canal shall 'be forever exempt from the payment of any tax imposition or assessment whatsoever.' This I understand to apply only so far as the State of Virginia is concerned. Section 1 of the Act of Congress above referred to ratifies and confirms the act of incorporation by the State of Virginia only so far as the District of Columbia is concerned; or in other words, the general provisions of the incorporating act is thereby extended over that part of the Ches. & Ohio Canal in the District of Columbia. I do not understand this section of the Act of Congress to say or to mean that the Ches. & Ohio Canal shall 'be forever exempt from the payment of any tax, imposition or assessment whatsoever.'²⁵⁹

Near the end of July, the canal again became the scene of military hostilities. After routing the Federals under General George Crook at the Second Battle of Kernstown, Virginia, on July 24, Early's Confederates in the northern Shenandoah followed the retreating bluecoats in a heavy rain to Bunker Hill, north of Winchester. Fighting erupted at Bunker Hill, Martinsburg, and Williamsport on the 25th, and the Union troops crossed the Potomac at Boteler's Ford on the 26th and encamped near Hagerstown, leaving guards at all the Potomac River fords between Antietam Creek and Hancock.²⁶⁰

As Early carried out an operation to destroy portions of the Baltimore & Ohio Railroad in the northern Shenandoah, changes were made in the Union command along the Potomac better to oppose the new Rebel threat. On the 29th Early's cavalry under Brigadier General John McCausland crossed the Potomac at McCoy's Ferry. Marching directly on Clear Spring, the Rebels drove a 400-man Federal cavalry unit five miles back toward Hagerstown before proceeding to Mercersburg, Pennsylvania. The following day saw the firing of Chambersburg and further skirmishing at Emmitsburg, Monocacy Junction, and Shepherdstown.

Entering Hancock early on the morning of the 31st, the Rebels under McCausland demanded a ransom of \$30,000 and 5,000 cooked rations from the town. Although this demand could not be met, the citizens collected all the money they could raise and delivered it to the Rebel commander. Among the funds handed over to the invaders were "large sums of script, bonds,

²⁵⁷ Washington *Evening Star*, July 9, 1864, and Washington *Daily Intelligencer*, July 22, 1864.

²⁵⁸ *Proceedings of the President and Board of Directors*, K, 395.

²⁵⁹ Ferguson to Ringgold, August 27, 1864, Ltrs. Recd., C & O Co.

²⁶⁰ O. R., Series I, Vol. XXXVII, pt. 1, 326–331, and Long, *Civil War Day by Day*, 545–546.

and acceptances of the [canal] company" that were taken from Jacob Snively, the collector at the town.²⁶¹

Federal cavalry under Averell pursuing the Confederates attacked them at Hancock later in the day. The Rebels pulled out to the northwest toward Cumberland. Here on August 1 the Confederates staged an assault on the Union lines stretched along the heights two miles east of the city near Folck's Mill overlooking the valley of Evitts Creek.²⁶²

During the night the Rebels abandoned the field and on August 2 they proceeded down the Oldtown Road toward the Deep Cut. Here the 153d Ohio, after destroying Cresap's Bridge over the canal, had taken position on Alum Hill. While Confederate artillery softened the Federals, several Virginia battalions marched toward a section of the canal that had been left unguarded by the bluecoats. Wrecking a nearby building, the Confederates used the timbers to bridge the waterway. Crossing the canal, the Rebels quickly turned the Ohioans' flank and forced them to flee across the Potomac. On the south side of the river some of the Union soldiers were posted behind the railroad embankment while others boarded an ironclad train that had been brought down from Cumberland. The train, consisting of four armored cars with three guns on each, was soon knocked out by the Confederate artillery, and the Ohioans were forced to surrender.²⁶³

Meanwhile, the Confederates had begun to sense trouble as more Federals were moving into the area. Moreover, Major General Philip H. Sheridan had been named commander of the Army of the Shenandoah on August 1 with the specific task of ridding the Valley of Early and all Confederates. Thus, while the Ohioans were surrendering at Oldtown, Early's cavalry were fighting a rear-guard action at Hancock as they recrossed the Potomac. After a day of rest on the 3rd, Early's men skirmished at Antietam Ford, Maryland, on the 4th, as they remained a bane of the Federal forces in Virginia.²⁶⁴ The following day skirmishing broke out at Keedysville, Williamsport, and Hagerstown as Confederate units once more entered Maryland in a brief foray. Following a period of maneuvering on the Shenandoah as Sheridan attempted to destroy the Confederate guerillas under Early and Mosby, Early advanced toward the Potomac in late August but found all the fords between Shepherdstown and Williamsport well guarded.²⁶⁵

The Confederate raids into Maryland and the Federal attempts to quash the guerilla movements took their toll on the trade of the waterway. The Washington newspapers reported on the dismal fortunes of the canal during this period. On August 9 the *Chronicle* observed that the damage done to the waterway and to the boats along its line would "keep back over a hundred thousand tons of coal from the Washington market this season." Although repairs had commenced on the Antietam Aqueduct, Rebel forces in the vicinity had driven the crews away by firing across the river.²⁶⁶

The *Evening Star* of August 22 gave even a darker picture of the effect of the military activities on the canal. The plight of the waterway was described as follows:

Business upon the canal amounts to nothing comparatively. All that was received since the 1st of August by the canal was wood from farms within 20 miles of town. Ice from Middleton's ice-houses, 12 miles distant [at Widewater], and a few hundred bushels of grain from points on the canal, the most distant of which is Berlin, 55 miles. The total number of arrivals was 20, an average of one daily up to last Saturday.

²⁶¹ *Proceedings of the President and Board of Directors*, K, 398–399.

²⁶² O. R., Series I, Vol. XXXVII, pt. 1, 188–189, 354–355.

²⁶³ *Ibid.*, and Lowe to Ringgold, August 25, 1864, Ltrs. Recd., C & O Co.

²⁶⁴ Long, *Civil War Day by Day*, 549–551.

²⁶⁵ Joel J. Williamson, *Mosby's Rangers* (New York, 1896), 220–222.

²⁶⁶ Washington *Chronicle*, August 9, 1864.

The prospect of reopening of the coal trade this season is regarded by the agents of the companies as very unpromising.²⁶⁷

As there was no through navigation at all during the month of August, only \$398.80 in tolls was collected giving the canal its new low for a single month since July 1861.²⁶⁸

As a result of effective Federal cavalry operations the Potomac Valley was quiet by early September, and the scene of small military skirmishes and raids moved well back into the Shenandoah Valley. On the 8th the board, taking cognizance of the return of calm to the valley, commenced to place the canal back into operation. The directors determined

That the payment of toll be required on such boats as were destroyed by burning, only for the distance which the cargo was transported, and that the several Supts. be directed to deliver such coal as has been removed from the canal, as far as practicable, to the several owners thereof.²⁶⁹

The prospects for reopening the canal to boat traffic were more encouraging by mid-September than they had been for nearly two months. In an article on the 13th, the Washington *Evening News* reported that:

The news from the western divisions of the canal is cheering. The repairs are progressing rapidly, and it is hoped that the empty boats which are lying at Georgetown, about fifty in number, will be able to go through to Cumberland before the close of the week, and that next week the coal trade will be reopened, and all the docks be as noisy as ever, with the busy beavers employed in receiving the cargoes for shipment at the wharves.

Up to this date [during the month of September] the arrivals by the canal were an even dozen. Of these, three were rafts bringing iron from Cabin John Bridge; six were boats laden with wood from points within twenty miles of town; two boats laden with grain and flour, and one with hay, all from landings within forty-five miles of town. In the same time there were twenty-one departures, three of these boats, venturing to try to pass through to Cumberland; the others were bound for nearer landings.

Of these five only carried cargoes, principally dry goods, groceries, lumber and fertilizers. The resumption of trade through to Cumberland will restore to Georgetown the appearance of life which was visible just before the rebel raid which suspended the trade by this route.²⁷⁰

Encouraged by these developments, the representatives of the Allegany County coal companies met in mid-September to agree upon joint action with reference to the demands of the miners and boatmen for higher rates. The result of the conference was that the demands of both groups were met. The price for mining was fixed at \$1 per ton and that for transportation was set at \$3 per ton.²⁷¹

²⁶⁷ Washington *Evening Star*, August 22, 1864.

²⁶⁸ *Thirty-Seventh Annual Report* (1865), C & O Co., Appendix B, 10.

²⁶⁹ *Proceedings of the President and Board of Directors*, K, 398.

²⁷⁰ Washington *Evening Times*, September 13, 1864.

²⁷¹ *Cumberland Alleganian*, September 21, 1864, quoted in Harvey, *Civil War and Maryland Coal Trade*, 376.

Meanwhile, the repair crews which had commenced work shortly after the Confederate withdrawal had the canal ready for navigation by September 20. However, the repairs and clean-up details continued at their jobs until the end of the month. Superintendent Benton of the Antietam Division reported on October 1 that he had just completed the removal of 24 loaded coal boats that had been burned and sunk between Dams Nos. 3 and 4. Moreover, four new lock gates had been installed at Lock No. 37, and the Antietam Aqueduct had been completed with the aid of Superintendent Cameron of the Georgetown Division.²⁷²

Superintendent Masters of the Williamsport Division informed canal officials on October 3 that he had commenced repairs as soon as the Rebels had left the country. Considerable damage had been done to the upper portion of the Conococheague Aqueduct during the last raid. However, the major problem on the division was the leaks in Dam No. 5 which had resulted in a shortage of water for passing loaded boats down to Dam No. 4. After some boats were partially unloaded at Guard Lock No. 5 on September 30 to allow them to proceed down the canal, a rain storm on October 1 had raised the level of water behind the dam. Repair crews were at work tightening the structure and hopefully would succeed in patching the leaks before the water level fell again.²⁷³

Periodic night forays across the Potomac by Confederate guerilla units under Mosby and White continued to hamper canal operations during September and October. Known as "Mosby's Rangers," and "White's Battalion" or the "Loudoun Rangers," these roving bands numbering some 400 men spread fear among the boatmen along the canal as they staged a series of lightning raids into Maryland to steal horses and mules, burn barges, destroy Baltimore & Ohio trains, and cut the telegraph wires leading from Washington.²⁷⁴ On September 29, the company officials received word from A. C. Greene at Cumberland that the

Rebs are stealing the horses from the Boats clear to Cumbd. Two boats have been robbed within ten miles of Cumbd. and last night a gang of McNeill's men crossed at Black Oak bottom, passed over Will's Mountain into the valley of Georges Creek and swept the coal mines of their horses. The American Co. lost sixteen.

Greene went on to complain that the Union army commander at Cumberland was doing nothing to counter the tactics of the guerrillas:

In the meantime Gen. Kelly sits in Cumbd. surrounded by thousands of men but takes no steps to prevent or to punish their maraudings. I wish you would impress upon [Secretary of War] Stanton the facts and the consequences resulting from them. The canal trade is paralyzed by reason of them.²⁷⁵

The most notorious raid occurred on the night of October 14 when some 80 of Mosby's men under Captain William Chapman crossed the Potomac at White's Ford, four miles below the mouth of the Monocacy River. Moving up the towpath, the marauders burned some ten canal boats loaded with freight after stealing about 20 horses and mules from the boatmen. They also wreaked havoc on the Noland's Ferry Bridge by tearing loose its superstructure and throwing the debris into the canal. The Rebel band then passed through Licksville to Adamstown, cutting the telegraph wires along the route. After fighting off a Union cavalry unit near Point of Rocks, the

²⁷² Benton to President and Directors, October 1, 1864, Ltrs. Recd., C & O Co.

²⁷³ Masters to President and Directors, October 3, 1864, Ltrs. Recd., C & O Co.

²⁷⁴ Williamson, *Mosby's Rangers*, 249-250.

²⁷⁵ Greene to Spates, September 29, 1864, Ltrs. Recd., C & O Co.

Rebels reached the canal only to find a detachment of Federal infantry tearing up the bridge across the waterway and throwing the timber into the prism. Quickly routing them, Chapman had his men relay the bridge and recross the river at Cheek's Ford. The Confederate unit reached the Virginia shore in safety without having any injuries throughout the entire operation.²⁷⁶

Two days after the raid, on the 16th, Superintendent Spates of the Monocacy Division informed canal officials of the consequences of the foray. Many boatmen between Dams Nos. 2 and 3 were refusing to move their vessels as there were no Union guards between Muddy Branch and Nolands Ferry. Unless Federals were posted along the river between those two locations, navigation on that stretch of the canal would stop.²⁷⁷

Two weeks later, on the 30th, Superintendent Spates informed the directors that the canal was functioning very well. Federal army units had been placed along the river from Muddy Branch to Nolands Ferry, and the boatmen were making every effort to use the remaining balance of the season to the best advantage. However, there were several problems on his division. The bridge over the canal at Nolands Ferry that had been destroyed by the Rebels had not been replaced. As the military was no longer using the ferry at that location, he had ordered his crews to gather up the timbers and put them in a secure place until the ferry was reopened and the bridge was needed. The feed store at Lock No. 28 was being utilized as a picket station by Northern troops, thus depriving the owner of its use. The Baltimore & Ohio Railroad had placed a stationary engine along the berm side of the canal at Sandy Hook to pump a considerable quantity of water from that portion of the trunk to supply a heavy trade on their line. This action, which he had not approved, was reducing the level of the water in the canal to such an extent that some loaded boats were scraping the bottom.²⁷⁸

The normal functioning of the canal during the remainder of the boating season was reflected in the expanding business ventures along the line. Consideration was given to a request by Cyrus Dellinger on November 10 to erect a feed store at Williamsport to cater to the needs of the passing boatmen.²⁷⁹ On December 9 the directors granted permission to Dan S. White to occupy and use the warehouse that he had constructed at Conrad's Ferry prior to the summer Confederate raids for the receipt, storage, and transportation of coal on the waterway.²⁸⁰

Perhaps the most ambitious project to be undertaken at this time was the decision of the Consolidation Coal Company to install new hoisting machinery and make other improvements for the transshipment of coal at the Linthicum-owned wharf in Georgetown. As water from the canal would be needed to operate the new hoisting apparatus, the directors determined to allow the coal company

to take so much water from the canal, not exceeding the quantity necessary to pass a loaded boat into the river and back again as may be needed to make their experiment with the pneumatic cylinder in transferring coal from the canal to the river.

The water was to be leased from the canal company on terms similar to those that had been granted earlier to William Ray and the Swanton Coal Company for the installation of unloading machinery.²⁸¹

²⁷⁶ Williamson, *Mosby's Rangers*, 264–267, and Spates to Ringgold, October 16, 1864, Ltrs. Recd., C & O Co.

²⁷⁷ Spates to Ringgold, October 16, 1864, Ltrs. Recd., C & O Co.

²⁷⁸ Spates to President and Board of Directors, October 30, 1864, Ltrs. Recd., C & O Co.

²⁷⁹ *Proceedings of the President and Board of Directors*, K, 406.

²⁸⁰ *Ibid.*, K, 410.

²⁸¹ *Ibid.*, K, 406–407.

Despite the quickened pace of business activity on the canal, there were still numerous reports of discouraging developments along the waterway. On November 10 the directors were informed by W. C. Smith, a civil engineer who was under contract to the company, that he had measured recently the amount of water used by various mills and coal wharves at Georgetown. He had found that most of the establishments were using large amounts of water in excess of the quantities allowed by their leases. Accordingly, the Superintendent of the Georgetown Division was authorized to install new water gauges that were approved by Smith at each of the mills. The cost of the new devices was to be paid by the mill owners. Henceforth the canal company would initiate action against those millers who continued to disregard their leases.²⁸²

On the same day that the board received word of the water problem, it was notified of other events along the line that were related to the military situation in the Potomac Valley. Superintendent Spates of the Monocacy Division reported that he had been robbed recently of \$50 by several Union soldiers while carrying out his duties.²⁸³ George Hardy, the tender of the important Harpers Ferry locks, Nos. 35–36, had been drafted into the Federal army, and his wife and children were operating the locks in his absence.²⁸⁴ Obadiah Barger, an old man who had tended Locks Nos. 45–46 for a number of years until Susan Newcomer was appointed to the position in September 1864, complained that she had never worked at the locks but instead had assigned her job to an inexperienced youth without informing the division superintendent. As he was an aged man who could not support himself in another occupation, he requested and received his old lock-tender job back.²⁸⁵

More discouraging news arrived from Superintendent Spates on November 30. Although the Monocacy Division was operating, the locks, waste weirs, and flumes were showing signs of considerable decay. The feeder outside Guard Lock No. 3 was almost filled with sediment and there were large sand bars inside the feeder for some 200 yards. The Union soldiers stationed along the canal had filled up the towpath and berm sides of several culverts, and when he had ordered his repair crews to clear the culvert barrels the soldiers had prevented the work. The family of the lock-keeper at Lock No. 33 was "much annoyed and almost driven from the lock by the offensive odor arising from the embalming of dead bodies" in a nearby company-owned house that had been rented to the embalming parties by Messrs. Robias and Rogers, its tenants. Allen M. Benson, the keeper at Lock No. 27 had been fired "for disobedience of orders and for destroying and threatening to destroy the Company's property."²⁸⁶

After the canal was closed by ice in early December, President Spates began to press the military for the removal of obstructions in the culverts. Accordingly, Brigadier General E. B. Tyler informed Spates on December 21 that orders had been issued to open all the culverts that had been closed by the military. As he fully appreciated "the importance of the canal to both the Government and the public," Tyler promised that he would not permit his men "to interrupt its workings."²⁸⁷

Despite the Confederate raids and the lingering uneasiness of the military situation in the Potomac Valley, the year 1864 was a profitable one for the Cumberland coal trade and the canal company. Writing in the *Merchants' Magazine and Commercial Review* in May 1865, concerning the rising demand for coal to support the Northern war effort, C. B. Conant stated that

²⁸² *Ibid.*, K, 407, 419, 422–423.

²⁸³ *Ibid.*, K, 405.

²⁸⁴ *Ibid.*

²⁸⁵ Barger to Brengle, Spates, and Watson (three letters); November 4, 1864, Ltrs. Recd., C & O Co.

²⁸⁶ Spates to President and Directors, November 30, 1864, Ltrs. Recd., C & O Co.

²⁸⁷ Tyler to Spates, December 21, 1864, in Spates Papers.

more coal was demanded [in 1864] by private manufacturers and carriers engaged in making and transporting arms, munitions, and supplies for Government.

The federal government itself increased its consumption of coal by 200,000 tons in 1861 to 1,000,000 tons in 1864.²⁸⁸

The prosperous year also saw an increase in the coal trade statistics on the canal. The total tonnage on the line rose by nearly 10 percent over the 1863 figure to 290,772 tons. The amount of coal shipped over the canal increases by some 12 percent over the total for the previous year to 260,368 tons. The rise in trade, as well as the increase in tolls on coal, enabled the company to realize a 32 percent increase in revenue from tolls over the previous year's totals to \$225, 897.34. All told, the year 1864 saw the highest total tonnage carried on the waterway since 1860, and it was the third best year in that respect in the history of the company. In terms of the revenue derived from the tolls, it was the most profitable in the history of the canal to date.²⁸⁹

At the annual meeting of the stockholders held on June 5, 1865, President Spates reported on the progress of the waterway during 1864. He observed that

We have the satisfaction to state that the business of the Company for the past year has been more prosperous than any preceding year since its organization; that the condition of the Canal has been better than for many years previously; and that the transportation upon it was more regular and less interrupted, until the invasion of the enemy in July last, when material damages were sustained, and the navigation was suspended for three months of the most active and profitable portion of the year. The cost of repairs from the destruction of the works did not exceed \$12,000, but it was estimated that the revenues of the Company were diminished by the casualty to the extent of \$200,000, and about eighty boats were destroyed, thus reducing the means of transportation after the resumption of navigation.²⁹⁰

²⁸⁸ C. B. Conant, "Coal Fever: The Price and Prospects of Anthracite Coal," *Merchants' Magazine and Commercial Review*, (May 1865), 359.

²⁸⁹ Sanderlin, *The Great National Project*, 307.

²⁹⁰ *Thirty-Seventh Annual Report* (1865), 3.

VI. PEACE COMES TO THE CANAL: 1865

The extreme severity of the 1864–65 winter closed the canal to navigation earlier than usual in December and precluded the commencement of repairs until spring. The Potomac River and the canal were still frozen in late February arousing fears that the spring coal trade would be hindered, and even worse, that an ice freshet might sweep down the valley when warmer weather broke up the ice. The *Hagerstown Mail* reported on February 25 that:

It has been hoped that there would be a speedy reopening of the navigation to Cumberland, and some of the dealers have expected to receive supplies of coal by the 1st of March; but this is considered by the superintendent of the canal as an impossibility. The ice on the western levels is very thick and bank high. A sudden freshet is dreaded, and not without reason, for such a freshet, bringing down the ice, would be very dangerous to the lower sections, and might so damage the canal as to delay navigation for a considerable length of time. It is ordered by the Canal Commissioners that the water shall be drawn off at this terminus on the 22d instant, and the workmen will proceed at once to repair damages, which will probably require ten days to complete the work. After which the route will be opened as soon as possible, and the coal and produce trade will be resumed. The quantity of supplies at the western depots will require a large number of boats for transportation.²⁹¹

Not only were the Potomac Valley residents concerned about the weather, but they were also alarmed by two daring Confederate raids at Cumberland and Edwards Ferry in late February. On the night of February 21–22, some 65 men, known as McNeill's Rangers, crossed the Potomac near Brady's Mills and entered Cumberland while approximately 8,000 Federals were encamped in the city. After destroying the office of the military telegraph, the Rebels captured Generals Kelly and Crook while they were sleeping and took them, along with their horses, down the canal towpath to Wiley's Ford, where they crossed the river into Virginia. A Federal cavalry company pursued the guerrillas to Romney, where a skirmish occurred, but the prisoners were already on their way to Richmond.²⁹² Relative to the foray at Edwards Ferry, the *New York Times* reported on February 26:

A night or two ago a squad of White's guerrillas crossed the Potomac River, in the neighborhood of Edward's Ferry, and drove in our pickets. They shot three men of the First Delaware Cavalry, who are on duty there, and carried off a number of horses. A part of the gang visited a store in the neighborhood, and took from it all the articles they could carry off. They then retired across the river into Virginia, not however, without loss, for one of their number was killed and two others so seriously wounded as to render it necessary to hold them upon their horses while recrossing the river. One of our men is supposed to be mortally wounded.²⁹³

Early in March the anxieties of the Potomac Valley residents were realized when a heavy freshet resulted from the simultaneous breaking up of the large ice flows in the river and considerable downpours of rain. The canal banks and the towpath were washed in many places, but with the

²⁹¹ *Hagerstown Mail*, February 25, 1865.

²⁹² Lowdermilk, *History of Cumberland*, 420–422, and *New York Times*, February 26, 1865.

²⁹³ *New York Times*, February 26, 1865, and Ray Eldon Hiebert and Richard K. MacMaster, *A Grateful Remembrance: The Story of Montgomery County, Maryland* (Rockville, 1976), 175.

exception of some logs being removed from the cribs on the Virginia side of Dam No. 5, there were no serious breaches or injuries to the masonry work. After quick remedial repairs, the canal was ready for navigation about March 20. However, business was not actively resumed until April 1, because the coal shippers had not made satisfactory arrangements for transportation.²⁹⁴

Following a period of negotiations, the canal company agreed on March 9 to rent the property on the west side of the Rock Creek Basin to the federal government until the end of the war. Earlier on September 8, 1864, the New York-based Mayer interests that had rented the land in March notified canal officials that they were no longer interested in the property as a result of the delay in gaining possession of it. Accordingly, the company issued writs of ejectment against the defiant tenants, who then rented their properties to the Quartermaster Department. On November 14 the Circuit Court of the District of Columbia ruled in favor of the canal company by dispossessing the tenants of their claims to the land. However, the military already had established facilities on the property, and the canal company was forced to continue renting the land to the government at the same monthly rates that had been negotiated by the ex-tenants.²⁹⁵

Meanwhile, the Civil War was drawing to a close. After completing his "march to the sea," Union General William T. Sherman struck northward through the Carolinas on February 1 to unite with Grant in Virginia. Within six weeks, the capitals and major cities of both North and South Carolina were in Federal hands. On April 2 Grant broke the Confederate position at Five Forks, 16 miles southwest of Petersburg, and Lee's Army of Northern Virginia was forced to retreat westward. After the ragged 28,000 man army was surrounded near Appomattox Court House, Lee surrendered his command to Grant on April 9.²⁹⁶

After the commencement of navigation on April 1, commerce on the waterway proceeded at a slow pace and came to a standstill by April 26. The end of the war meant the reduction of choice government contracts for manufactured goods with an inevitable reflection on the coal trade. With the restoration of normal competition, the Cumberland coal interests began to look for ways to decrease costs and attract customers in the northern markets. The high rates previously paid for mining and transportation of coal could not be continued. As the miners and the boatmen were unwilling to see their wages and profits reduced, wage disputes between the miners and the coal companies led to a month-long suspension of mining in the coal fields. At the same time, the boatmen put pressure on the canal board to aid their cause on the declining coal trade by reducing the toll on coal shipments, but it rejected such recommendations. As a result of these developments, the amount of coal shipped on the canal up to June 1 was 61,677 tons compared to 101,390 tons during the same period in 1864. The total revenue collected from tolls for the current season was \$65,097.44 compared with \$74,988.58 over the same period the previous year.²⁹⁷

In his annual report to the company stockholders on June 5, President Spates provided information on the condition of the canal and the state of its financial affairs. Among his observations were the following:

The canal is now in good navigable condition, but to put it in thorough and permanent order, make it reliable for uninterrupted navigation, and afford proper facilities to the largely increasing trade upon it, considerable expenditures will still be required. It is pro-

²⁹⁴ *Thirty-Seventh Annual Report* (1865), 3, and Masters to Board of Directors, March 2, 1865, Ltrs. Recd., C & O Co.

²⁹⁵ *Proceedings of the President and Board of Directors*, K, 399–400, 402–403, 486, and Ringgold to Moore, March 9, 1865, Ltrs. Sent, C & O Co.

²⁹⁶ Allan Nevins, *The War for the Union* (4 books, New York, 1971), Book IV, 309–312.

²⁹⁷ *Thirty-Seventh Annual Report* (1865), 6–7.

posed to do this during the present season as far as the revenues of the Company will admit consistent with other indispensable obligations....

Since the accession of the present Board in February 1862, the state of the country bordering the Canal, owing to the various military operations and restrictions, has been such as to render all matters connected with its business very precarious. The aggregate revenues of the Company for the years 1861 and 1862, were respectively in 1861, \$75,741.90, in 1862, \$72,624.95, whilst the maintenance of the Canal restricted by these inadequate means and the exhausted credit of the Company, was in 1861, \$105,607.82, in 1862, \$86,651.26, thus increasing the already overburdened debts of the Company for these two years, a further sum of \$43,892.23 in addition to accumulating interest on obligations of the Company for repairs &c., which had hitherto been regularly paid, amounting to about \$30,000.

During the years 1863 and 1864 however, notwithstanding the frequent interruptions and restrictions still continued by the course of the war, these disadvantages have been overcome in a great measure, and after the payment of all obligations incurred by the incumbent Board, [\$171,367.10 of] claims previously existing have been liquidated and paid...

There still remain floating or current debts of the Company [\$301,024.25] to be provided for from their surplus revenues, after the proper maintenance and improvements required to render the Canal effective and durable, which it is proposed to liquidate as early as practicable....²⁹⁸

²⁹⁸ *Ibid*, 3-5. In response to an order of the Speaker of the Maryland House of Delegates, Spates had delivered a similar report to that body on March 13. Spates to Speaker, House of Delegates, March 13, 1865, Ltrs. Sent, C & O Co.

VII. THE CANAL IN THE AFTERMATH OF THE CIVIL WAR

The canal emerged from the Civil War on both a depressing note and a promising one. The waterway itself had suffered great physical damage from the military operations of the opposing armies. Furthermore, the military continued to occupy the Potomac Aqueduct and part of the Rock Creek mole, to the detriment of the canal's business. When the Quartermaster Department continued to insist on its right to occupy a portion of the wharves on the mole for a government coaling station, the canal company testily reacted by filing claims against the War Department for losses sustained as a result of military use of the waterway during hostilities. On May 2, 1866, the company informed Maryland Congressman Francis Thomas, a former canal president that

during the whole war the canal was freely used by the Government for transportation without compensation being made in the payment of tolls, that considerable damages were done to the works by the operations of the military and great losses sustained by restrictions imposed by them upon general transportation, and for these the Company have filed claims in the War Department for the years 1861 and 1862 \$75,391.96—1863 & 1864 \$292,330, making an aggregate sum of \$367,721.96.²⁹⁹

Later on September 5, 1866, the directors appealed directly to President Andrew Johnson

to relieve from military occupation and turn over to the Alexandria Canal Company the Potomac Aqueduct, which belongs to that Company, and is at present the obstacle to the early opening of that Canal.³⁰⁰

On the other hand, the financial condition of the company had measurably improved as a result of the revival of trade after 1863. Bankruptcy, which had threatened the company in the late 1850s, no longer seemed to be so near. The improved commercial and financial status of the company made it possible to undertake the sorely needed improvements such as the raising of the Georgetown bridges, that had been postponed and those in progress, such as the new masonry Dam No. 5, that had come to a halt during the war years.³⁰¹

The physical condition of the canal in 1865 was much worse than it had been before the war. Despite growing trade and revenues and some increase in repair expenditures toward the end of the conflict, the waterway had been generally neglected. The destruction of its works during the hostilities had been serious, and in addition, it had not received the attention required for normal maintenance. Only the most necessary repairs had been made, and then often in a hasty and slip-shod fashion. Evidence of the general state of the canal's deterioration was demonstrated by the occurrence of numerous breaches on the Georgetown, Monocacy, Antietam, and Cumberland Divisions between April and August in 1865.³⁰² It was reported that there were many trees bor-

²⁹⁹ Ringgold to Thomas, May 2, 1866, Ltrs. Sent, C&O co. Also see, Ringgold to Rucker, May 29, 1866, Ltrs. Sent, C&O Co., and Moore to Ringgold, May 28, 1866, Ltrs. Recd., C&O Co. After further negotiations, the military finally agreed to relinquish its claims to the mole wharves on January 31, 1868. Godey to Ringgold, January 10, 1868, Ltrs. Recd., C&O Co. and Proceedings of the President and Board of Directors, L, 56.

³⁰⁰ Proceedings of the President and Board of Directors, K, 511. After a number of similar appeals and considerable negotiations, the military relinquished control of the aqueduct. In July 1868 construction was begun on a wooden highway toll bridge built over the rewatered trunk.

³⁰¹ Sanderlin, *Great National Project*, 222–223.

³⁰² Ringgold to Greene, December 1, 1865, Ltrs. Sent, C&O Co., and Proceedings of the President and

dering the canal that had overgrown to the point that they were interfering with the passage of boats and the use of the towpath.³⁰³ Many of the lock gates needed to be replaced, and the heavy horse traffic on the towpath had worn it down at many points.³⁰⁴ The tidelocks in Georgetown were out of repair after being damaged by government occupation and mismanagement, and the Rock Creek Basin was largely filled in by the deposits of the creek. Moreover, the prism of the trunk was shrinking as a result of siltation deposits accumulating on the inner slopes and the floor of the canal. Hence it was no longer possible for two loaded boats to pass at many points along the canal.³⁰⁵

In November 1865 the canal company hired Charles P. Manning, a reputable civil engineer, to examine the waterway and to report on its condition and the repairs and improvements that were needed.³⁰⁶ In a comprehensive report filed on May 31, 1866, he made the following observations:

It is unnecessary for me to remind the Board that for several seasons previous to the last period of suspended navigation, no repairs beyond those of absolute necessity were either attempted or accomplished; nor that, consequently, the need of repairs during the past winter, and prospectively, for the current season of navigation has been and still is excessive.

Though I feel confident that free navigation can and will be maintained, without much difficulty during the current season, I fear that the ordinary gradual deposit of sediment added to the large amount which has already accumulated to an extent sufficient, in many places, to reduce the channel of the Canal to an area much less than is required for the passage of two loaded boats, will, at no far distant period, cause an entire suspension of navigation, during the business season of, possibly, a whole year, in order that the original proper dimensions of the trough may be thoroughly restored.

To mitigate, if not to effectively prevent the occurrence of this apprehended misfortune, the active and constant employment of a number of dredging boats, during the season navigation, is deemed essential, therefore, I advise the immediate construction of two more of these valuable machines, similar to the four now in use upon the line of the canal.

In general the trough of the Canal is free from dangerous, or even injurious leaks; but that portion of it which traverses the cavernous lime-stone district between South and North mountains, has always been, and still is subject to very dangerous leaks and consequent breaches, for which there appears to be no effectual remedy, short of the elevation of the entire body of the Canal (bottom, towpath, &c.,) to a height of two feet or more above its present levels, wherever the most obstinate and dangerous of these leaks are known to exist, or continually threaten to break forth.

In general the masonry of the aqueducts, culverts and Locks is both substantial and in good repair, the only exception requiring special remark being the aqueduct that spans the Conococheague River, which fine structure was wantonly and most seriously injured by rebel soldiers during the late rebellion. At present

Board of Directors, K, 442

³⁰³ Proceedings of the President and Board of Directors, K, 438

³⁰⁴ Cameron to President and Directors, November 9, 1865, Ltrs. Recd., C&O Co.

³⁰⁵ Proceedings of the President and Board of Directors, K, 489–490

³⁰⁶ *Ibid.*, K, 465

the navigation is maintained over this dilapidated aqueduct by means of a substantial wooden trunk which is supported upon the original arches of the masonry and quite secure from the damaging effects of ordinary floods.

Generally speaking the lock gates are in excellent condition; but there are many that should be taken out and replaced by new ones as rapidly as circumstances may permit, and numbers thus removed might then be sufficiently repaired to answer all the purposes of reliable substitutes, or duplicates in cases of accident. These perishable appendages of the Canal are liable to great abuse at the hands of reckless boatmen, and therefore are a constant source of both anxiety and expense.

In relation to the dams, I have to say, that the "Little Falls" and "Seneca" (Nos. 1 & 2,) are in a somewhat dilapidated and inefficient state; and that the one at Harper's Ferry (No. 3,) commonly known as "The Government Dam," is in ordinarily good condition. The two first named of these structures are composed of brush and loose stones, and the last named of wooden crib-work, filled with loose stones and sheathed with timber and planks. Dam No. 4 is not only in sound condition, but being exclusively a structure of stone, is regarded as thoroughly permanent, if not quite imperishable.

Two thirds of Dam No. 5 are new, and made exclusively of stone, the remaining third being composed partly of temporary crib work filled with loose stone, but mainly of the original structure, which was built after the fashion of the one at Harper's Ferry.

Dam No. 6, is in general good condition, and regarded as a permanent structure, though formed of crib-work, filled with loose stones and sheathed with timber and planks, similar in most respects to Dam No. 3, but of better form and more substantial construction. The remaining Dam (at the terminus of the Canal in Cumberland) is exclusively of stone, and in perfect order.

Of these Dams Nos. 1 and 2 need unusual repairs, requiring altogether an expenditure of perhaps, no less than twenty-five thousand dollars, in order to restore them to thorough usefulness.

Dam No. 5 should be completed without delay, and preparations have been made and are now in progress to accomplish the major part, if not all of the unfinished stone-work during the coming summer and autumn. To complete this work an expenditure of about sixty thousand dollars will be required.

Of the remaining Dams, No. 3 needs only ordinary repairs. No. 4 a little back-filling of loose stones or gravel, and the one at Cumberland substantially nothing.

Owing to the great draught of water from Dam No. 1, chiefly requisite for milling, rather than the legitimate purposes of the Canal, the time is rapidly approaching, if it has not already arrived, when the construction of a new and larger feeder-canal, in lieu of, and entirely apart from the existing narrow and un-substantial one at this Dam, should be commence and diligently prosecuted to an early completion.

At present the consumption of water for milling purposes in Georgetown exceeds four millions of gallons per hour, or enough to furnish lockage to tide water for *forty loaded boats* and a like number of *empty ones back again*.

The cost of constructing the proposed new feeder will probably be less than, but will not exceed twenty five thousand dollars.

Many of the lock keepers' houses need considerable repairing, and nearly all of these buildings, more or less restoration to a condition of necessary comfort. The expenditure of perhaps, five thousand dollars for this purpose, would accomplish all that is pressingly needed.³⁰⁷

The restoration and improvement of the canal began almost immediately after the conclusion of the war. On April 12, three days after Lee surrendered to Grant at Appomattox Court House, the board received word that the Corporation of Georgetown had agreed that the bridges over the canal east and west of the Market House were to be raised to a height of 11 feet above the water line. Accordingly, a contract was let to C. C. Carman for the raising and repair of the bridge west of the Market and the reconstruction of the bridge east of the Market.³⁰⁸ In July the bridges at Lock No. 68 and at Patterson's Creek that had been destroyed by the Rebels were ordered to be rebuilt.³⁰⁹ Construction of the masonry dam replacing the temporary structure at Dam No. 5 was soon resumed. By June 4, 1866, some 400 feet had been completed from the Virginia abutment with about 300 feet remaining to be done before it was finished to the Maryland shore. Plans were also considered for the improvement of Dams Nos. 1-3.³¹⁰ During the winter of 1865-66, many portions of the canal were dredged, and large amounts of sediment were removed from the prism. Other winter projects included repairs to the masonry works, the replacement of deteriorating lock gates, and work on the waste weirs.

In June 1866 the canal company finally came to an agreement with the corporate authorities of Georgetown concerning the manner of raising the bridges over the canal. After the Georgetown aldermen authorized the substitution of permanent iron bridges for the stone structures at Congress, Jefferson, Washington, and Greene Street, a contract was let to Duvall & Co. on August 9. The new structures, costing \$22,000 were completed by early 1867.³¹¹

In anticipation of the resumption of trade through Georgetown, the company hired an engineer in the spring of 1867 to draw up plans and estimates for the restoration of the tidelock and tumbling dam at the mouth of Rock Creek. A contract was let to Deeter & Maynard for the work that was to cost an estimated \$9,000.³¹² At the same time, the company employed its dredging machines to restore the canal to its original dimensions from the mouth of Rock Creek to the Foundry above Georgetown.³¹³

The repair of Civil War damages to the canal continued until 1869. In June of that year the stockholders were informed that during the preceding twelve months \$169,258.40 had been spent on ordinary repairs and \$10,453.42 on extraordinary repairs. Commenting on these large expenditures, President Spates stated:

Whilst the above-mentioned expenditures may be considered heavy, yet the condition of the canal was such after the close of the war, from the fact of its being

³⁰⁷ *Thirty-Eighth Annual Report* (1866), C&O Co., 6-9

³⁰⁸ Proceedings of the President and Board of Directors, K, 422; Smith to Spates, April 10, 1865, Ltrs. Recd., C&O Co.; and *Ordinances and Resolutions of the Corporation of Georgetown, from January, 1865, to January, 1866* (Georgetown, 1866), 19. For more information on this topic, see Edwin C. Bearss, "The Bridges, Historic Structures Report—Part II" (NPS MSS., 1968), 40-42.

³⁰⁹ Proceedings of the President and Board of Directors, K, 434

³¹⁰ *Thirty-Eighth Annual Report* (1866), C&O Co., 4-5

³¹¹ Proceedings of the President and Board of Directors, K, 501-502, 508; Ringgold to Wallack, October 20, 1866, Ltrs. Sent, C&O Co.; and Ordinance of the Corporation of Georgetown, June 26, 1866, Ltrs. Recd., C&O Co. Also see, Bearss, "Bridges," 42-44

³¹² *Thirty-Ninth Annual Report* (1867), C&O Co., 5

³¹³ *Fortieth Annual Report* (1868), C&O Co., 4

continually damaged by the contending armies, as to employ a large force to enable the Board to place its condition beyond any ordinary contingency. This, the Board, with judgment and discreetness, have done; and they now have the pleasure of reporting to the Stockholders the canal fully recovered from all damages growing out of the war. The whole line is now in thorough, complete, and safe condition.

During the past ten years little or nothing had been done towards repairing and improving lock-houses, bridges, culverts, aqueducts, locks, lock-gates, and waste-weirs of the Company; many of them had become entirely unfit for use and were becoming worthless, rendering it absolutely essential to the requirements of the Company to have them repaired. This the Board have done, and, although at heavy cost, they now present a comfortable and substantial condition, and the fact may now be confidently stated that the condition of the canal in all its departments is such as to justify a largely decreased expenditure during the current year, unless overtaken by unseen and unexpected disaster.³¹⁴

Despite the progress in the restoration of the waterway, the canal company faced numerous difficulties during the postwar years. Heavy water freshets occurred in the Potomac Valley in 1865 and 1866, and a severe ice freshet in the spring of 1868 did considerable damage to the waterway.³¹⁵ The wage disputes between the Allegany County miners and the coal companies that had interfered with the coal trade in May and June 1865 again erupted in the spring of 1866.³¹⁶ As a result of the deflationary tendency of coal prices and the decreasing demand for that product, the board reduced tolls from $\frac{1}{2}$ cent to 4/10 of a cent a ton per mile in September 1866 and to 1/4 of a cent in March 1868.³¹⁷

The state of flux in Maryland politics during the Reconstruction era also had detrimental effects on the canal company. The Union coalition which had ruled the state since 1862 was undermined by the collapse of the Confederacy. Soon, political forces moved to establish a more natural realignment, a conservative reaction to the Radical Constitution of 1864 appeared, and Democrats commenced efforts to revitalize their decimated party. By 1867 Maryland's period of "Self-Reconstruction" had come to an end and a more stable party alignment had emerged. Augmented by Conservative Unionists, new voters, and returning veterans, the Democrats became the dominant party in Maryland and would remain so for many years to come under the leadership of Arthur P. Gorman.³¹⁸

The political instability in Maryland during the period of party realignment in the aftermath of the war was demonstrated by the return of local political influence to the canal. The brief postwar period between 1865 and 1870 witnessed four changes in canal administration. Alfred Spates, who had served as president since January 1861, was replaced by Jacob Snively in June 1865 only to return in August 1867. In June 1869 Josiah Gordon became president, but he was replaced in June 1870 by James E. Clarke.³¹⁹

Along with the frequent political upheavals, charges of fraudulence were placed against former canal officials. On December 9, 1869, the company's Committee of Accounts accused

³¹⁴ *Forty-First Annual Report* (1869), C&O Co., 4–5

³¹⁵ *Thirty-Ninth Annual Report* (1867), 5–6; *Fortieth Annual Report* (1868), 7; and Mans to President and Directors, July 11, 1868, Ltrs. Recd., C&O Co.

³¹⁶ *Thirty-Eighth Annual Report* (1866), 3–5, and *Thirty-Ninth Annual Report* (1867), 3

³¹⁷ Proceedings of the President and Board of Directors, K, 511, L, 82

³¹⁸ Richard Walsh and William Lloyd Fox, eds., *Maryland: A History, 1632–1974* (Baltimore, 1974), 377–392.

³¹⁹ Sanderlin, *Great National Project*, 224, 304.

Alfred Spates with nine separate charges of falsely obtaining for his own purposes appropriations amounting to between \$5,000 and \$80,000 for work already paid for during the period from February 1865 to October 1868. Division Superintendent George W. Spates was also charged with one count of misappropriation of funds.³²⁰ Both men maintained their innocence, claiming that they were the victims of the fractious political infighting then taking place in the state.³²¹ Alfred Spates appeared to vindicate himself by being elected to the State Senate from Allegany County in 1869, but the controversy continued unabated.³²² On February 9, 1870, the board ordered the company counsel, George A. Pearre, to demand from the two men the money they owed the company or face court suit.³²³

When the two accused men rebuffed the counsel, formal suits were initiated in the Circuit Court of Allegany County against Alfred Spates and in the Circuit Court of Montgomery County against George W. Spates. Although the evidence presented indicated a strong probability of misconduct, a citizens' committee from Cumberland appealed to the directors on October 12 to drop the charges.³²⁴ Although they refused to do so at that time by a 4-3 vote, all charges were finally dropped without further investigation on December 8. The action was taken on the grounds that the suit had been brought by ex-president Josiah Gordon and thus was "not authorized by the present or the former Board, and there being no prospect of successful prosecution."³²⁵

Despite unsettled trade conditions, political interference, and the expenditure of large sums of money for the restoration of the waterway, the financial condition of the company continued to improve. Canal trade increased each year with tonnage totals of 372,335 in 1865, 383,408 in 1866, 521,402 in 1867, 552,987 in 1868, and 723,938 in 1869.³²⁶ Receipts from tolls averaged nearly \$340,000 a year during the same period, thereby allowing the company to pay off its floating debt and enabling it to resume the payment of its long-term obligations.³²⁷ Thus, the stage was set for the "golden years" of the canal's history in the early 1870s when the waterway would experience its most stable and prosperous period.

³²⁰ Proceedings of the President and Board of Directors, L, 233–246. Earlier in July 1866, Alfred Spates had come under suspicion when it was found that in February 1865 he had withdrawn the \$13,000 appropriation from the U. S. Treasury that had been authorized by Congress for the raising of the Georgetown bridges. After he was voted out as president of the company in June, he kept the Treasury check without making any account of his transaction in the company's financial records. Under the threat of a suit in the federal courts, Spates returned the check to Jacob Snively, his successor, in September 1866. Ringgold to Roman, July 28, 1866, and Ringgold to Snively, September 19, 1866, Ltrs. Sent, C&O Co., and Proceedings of the President and Board of Directors, K, 507–508

³²¹ A. Spates to Poe, November 15, 1869, and Garden to Stockholders, February 5, 1870, in Spates Papers.

³²² A. Spates to Poe, November 15, 1869, and Gordon to Stockholders, February 15, 1870, in Spates Papers

³²³ Proceedings of the President and Board of Directors, L, 281, and Baltimore *American*, February 18, 1870, in Spates Papers

³²⁴ *Ibid.*, L, 370

³²⁵ *Ibid.*, L, 381

³²⁶ Sanderlin, *Great National Project*, 307

³²⁷ *Ibid.*, 307,309; *Thirty-Ninth Annual Report* (1867), 6; and Proceedings of the President and Board of Directors, L, 226–231.

APPENDIX A

DISCOVERY AND DEVELOPMENT OF GOLD VEINS NEAR GREAT FALLS

During the past 110 years more than 5,000 ounces of gold, valued at more than \$150,000, have been produced in Maryland. Almost all of this total has been extracted from small mines in the southern part of Montgomery County. The extensive group of workings near Great Falls was the most productive of the vein systems. Here were located the Ford, Watson, and Maryland mines, the latter being the largest and furnishing the greatest yields.¹

As early as 1827, Professor Ducatelle, a noted mineralogist of the period, stated that the region around Great Falls gave strong indications of the presence of gold.² Several years later, when Mrs. Trollope, the outspoken Englishwoman who was traveling in America preparatory for her publication on American manners, visited the residence of a German consul near Great Falls, she noted that traces of gold were found.³ However, it was not until the Civil War period that actual free samples of gold were found in the area. Although there is some controversy surrounding the discovery of gold near Great Falls, most authoritative sources agree that the discovery was made in 1861 near the present site of the Maryland mine by a member of a regiment under the command of Colonel Edward A. Baker, a United States Senator from Oregon and a close friend of President Lincoln.⁴

Shortly after the firing on Fort Sumter, Baker was commissioned by Lincoln to raise three regiments or infantry in Philadelphia. One of these, the 71st Pennsylvania, was placed under his command and was referred to informally as the "First California Regiment." This designation was apparently in honor of Colonel Isaac J. Wistar of Philadelphia, who was in charge of the enrolling work and who had commanded Indian Rangers in California and Oregon in the late 1840s during the Mexican War. The regiment was moved to Fortress Monroe, where it remained until after the Battle of First Manassas on July 21, 1861. Following that northern defeat, the regiment was transferred to the Virginia side of the Potomac opposite Washington, where it was engaged, along with other commands, in building Fort Ethan Allen near Chain Bridge and strengthening the capital's defenses. The 71st Pennsylvania crossed the Potomac on September 30 and marched nine miles to Great Falls, where it camped for the night. On October 1, it reached Rockville, and after spending the next night at Seneca Mills, the regiment encamped near Poolesville from the 3rd to the 20th. During this period, it is likely that small detachments remained on picket duty along the river from Great Falls to Seneca Creek. After the bloody Union defeat on October 21 in the Battle of Ball's Bluff, in which the regiment lost its leader and 312 men, the reorganized 71st Pennsylvania was assigned to picket duty along the Potomac between Conrad's Ferry and Point of Rocks until the spring of 1862.⁵

Following the war, several members of the 71st Pennsylvania organized a group that bought the farm on which the original discovery was made. Considerable prospecting and devel-

¹ John C. Reed, Jr., and John C. Reed, *Gold Veins Near Great Falls, Maryland*, (Geological Survey Bulletin 1286, 1969), 1. The location and annual production of the Montgomery County gold mines may be seen on the map and graph on the following pages.

² John Thomas Scharff, *History of Western Maryland* (2 vols., Philadelphia, 1882), I, 676.

³ James E. Mooney, ed., *Domestic Manners of the Americans* by Mrs. Trollope (Barre, 1969), 183–202, 227–234.

⁴ Reed and Reed, *Gold Veins Near Great Falls*, 4. and Edgar T. Ingalls, *The Discovery of Gold at Great Falls, Maryland* (N. P., 1960), 1–17. Map and chart from Reed and Reed, *Gold Veins Near Great Falls*, 2–4.

⁵ Charles H. Banes, *History of the Philadelphia Brigade* (Philadelphia, 1876), 2–32.

oping work was done, and in 1867 a shaft was sunk to a depth of about 100 feet at the future site of the Maryland mine. At least 7 ounces of gold were produced in 1868 and 4 ounces in 1869, but the work was soon abandoned.⁶

FORD MINE

During the 1880s, gold was discovered in the vicinity of the Ford Mine by George Kirk, a Georgia prospector. By February 1890, the veins were being worked by extensive open cuts on both sides of Cool Spring Branch, and a small mill was in operation near the mouth of the branch. Underground development at the Ford Mine commenced about 1890.

WATSON MINE

In the early 1900s considerable prospecting and development work were done on the veins along Carroll Branch, between the Maryland Mine and the Ford Mine, by the Great Falls Gold Mining Company. That area, which included the site of the Watson Mine, contained seven veins, the most important being the Potomac Vein that was explored by a 135-foot adit. The operations in that area, which continued until 1909, consisted of numerous pits and trenches and a few shallow shafts with short drafts and crosscuts.

MARYLAND MINE

About 1900 the property on which the Maryland Mine is located was taken over by the Maryland Gold Mining Company. A 135-foot shaft was sunk, and the mine was explored by drifts on the 50-foot and 100-foot levels. In 1903 a new shaft was started west of the vein and south of the old shaft. This shaft intersected the vein at a depth of 200 feet and was bottomed at 210 feet in 1906. The mine was shut down in 1908, but it was reopened briefly by the Empress Gold Mining Company of Philadelphia in 1912.

The most systematic exploration of the Great Falls veins began in 1915 when the Atlantic Development Company acquired the Ford Mine. Within three years the company had acquired tracts totaling 2,100 acres that included nearly all the known vein system. A. A. Hassan, a mining geologist and consulting engineer, directed an exploration program of extensive trenching, vein stripping, and diamond drilling. Reportedly, the operations found that a vein north of the Maryland Mine extended to a depth of 456 feet and that veins near the Ford Mine were at least 500 feet in depth.

American entry into World War I led to the closing of the mines in the fall of 1917. The Maryland Mine was reopened in the spring of 1918, and some development work and mining was conducted until 1922 when the mine was closed and the property sold.

After the price of gold was increased to \$35 an ounce in 1934, the Maryland Mining Company was organized in October of the following year. The Maryland Mine was reopened, and a new mill was installed. Between 1936 and 1940 about 6,000 tons of ore was produced, yielding more than 2,500 ounces of gold valued at \$90,000. The mine was closed in 1940, and no operations have been undertaken in the area since that time with the exception of some individual prospecting.⁷

⁶ Reed and Reed, *Gold Veins Near Great Falls*, 5, and Ingalls, *Discovery of Gold*, 1-17

⁷ Reed and Reed, *Gold Mines Near Great Falls*, 5-7 and Ingalls, *Discovery of Gold*, 1-17. Other sources that are of value in interpreting the "gold mine" story at Great Falls are: S. F. Simmons, "Notes on the Gold Deposits of Montgomery County, Maryland," *American Institute of Mining Engineers Transactions*, XVIII,

APPENDIX B

STATEMENT OF BOATS & NAMES OF OWNERS &C HELD BY
THE U. S. GOVERNMENT FROM BOOKS OF THE QUARTERMASTER, U. S. A.,
WASHINGTON, D. C., APRIL 17, 1861[2]

BOAT NAME	OWNER	BOAT VALUE	FURNI-TURE VALUE	DATE SEIZED	WHERE LYING
P. B. Petrie ¹	John Rinehart	\$900	—	—	Georgetown
John Humbert	John Rinehart	\$1,000	\$4	Feb. 17, 1862	Alexandria
F. & A. H. Dodge ¹	John Moffutt	\$800	\$2.50	Feb. 16, 1862	Liverpool Point
Kate McCormack	John McCormack	\$900	\$3	Feb. 17, 1862	Georgetown
S. B. Harrison ¹	Daniel Shives	\$500	—	Feb. 17, 1862	Liverpool Point
Capt. Wm. T. Aud	Not Known	\$1,300	—	Feb. 16, 1862	Fortress Monroe
Molly	Pat Broderick	\$1,200	—	Feb. 16, 1862	Fortress Monroe
Dr. J. Robertson	Mertens & Snyder	\$600	—	Feb. 18. 1862	Liverpool Point
G. Brent	Benjamin Mitchell	\$1,000	—	Feb. 16, 1862	Georgetown
Independence ¹	Jacob Zeigler	\$700	\$5	Feb. 18, 1862	Liverpool Point
R. R. Gregory ¹	Nancy Bowers	\$700	\$3	Feb. 16, 1862	Liverpool Point
Odd Fellow ¹	John Snyder	\$500	\$7	Feb. 13, 1862	Liverpool Point
Emperor ¹	John Young	\$850	\$2	Feb. 13, 1862	Liverpool Point
Geo. W. Hetsyer ¹	John H. Martin	\$600	—	Feb. 18, 1862	Liverpool Point
J. Murray	Patrick Broderick	\$1,000	—	Feb. 16, 1862	Georgetown
John Fitzpatrick ¹	A. J. Booze	\$400	\$6	Feb. 13, 1862	Liverpool Point
Union ¹	A. J. Booze	\$400	—	Feb. 20, 1862	Liverpool Point
Hard Times ¹	A. J. Booze	\$700	\$6	Feb. 13, 1862	Liverpool Point
John F. Bear	Frederick Bear	\$800	\$8	Feb. 13, 1862	Georgetown
Jane Louisa	American Coal Co.	\$700	\$4	Feb. 22, 1862	Georgetown
Samuel Luman	J. H. Kindle	\$700	\$4	Feb. 22, 1862	Georgetown
J. Arnold ¹	W. W. Faulkwell	\$700	\$4	Feb. 18, 1862	Liverpool Point
Juniatta ²	William Elder	\$700	\$3	Feb. 13, 1862	Liverpool Point
Maria Thompson ¹	American Coal Co.	\$400	—	Feb. 18, 1862	Liverpool Point
Stephen Castleman ²	George Hughes	\$500	\$5	Feb. 13, 1862	Liverpool Point
G. Hough	C. Hughes	\$800	\$10	Feb. 18, 1862	Georgetown
L. V. Savins ¹	John Savins	\$850	\$6	Feb. 18, 1862	Liverpool Point
J. M. Barnes	S. B. Barnes	\$800	\$1.50	Feb. 18, 1862	Fortress Monroe
Kate Barnes	S. B. Barnes	\$1,100	—	Feb. 18, 1862	Georgetown
Mt. Savage	American Coal Co.	\$700	\$5	Feb. 18, 1862	Georgetown
W. E. Webster	John A. Reid	\$1,00	—	Feb. 18, 1862	Georgetown
Three Brothers	John Spencer	\$1,00	\$4	Feb. 18, 1862	Fortress Monroe
Wm. Kissner ²	Abner Meryman	\$700	—	Feb. 18, 1862	Liverpool Point
M. E. Stonebreaker	American Coal Co.	\$700	\$5	Feb. 18, 1862	Georgetown
Thos. James	John A. Rinehart	\$700	\$5	Feb. 18, 1862	Georgetown
Geo. H. Mandy ¹	Peter Snyder	\$900	\$5	Feb. 18, 1862	Liverpool Point
D. Morrissey	Not Known	\$750	\$4	Feb. 26, 1862	Georgetown
Three Sisters	John Byroads	\$1,000	\$10	Feb. 21, 1862	Fortress Monroe
Y. Marmaduke ¹	Salem Cooper	\$800	\$8	Feb. 19, 1862	Liverpool Point

¹ Blst. Plaster

² Blst. Stone

Document in Spates Papers

391-411; C. W. Ostrander, "Gold in Montgomery County, Maryland," *Maryland Natural History Society Bulletin*, IX, 32-34; Titus Ulke, "Gold Mining Past and Present Near Washington, D. C.," *Rocks and Minerals*, XIV, 299-305; and W. H. Weed, *Notes on the Gold Veins Near Great Falls, Maryland* (U. S. Geological Survey Bulletin 260), 128-131.

Chesapeake & Ohio Canal Historic Resource Study
Unrau: 10. C&O Canal During the Civil War

BOAT NAME	OWNER	BOAT VALUE	FURNI-TURE VALUE	DATE SEIZED	WHERE LYING
J. M. Cross ¹	William Jordan	\$800	—	Feb. 18, 1862	Liverpool Point
M. E. McCoy ¹	John L. Jordan	\$1,000	—	Feb. 17, 1862	Liverpool Point
G. T. J. McKaig ¹	Martin Smith	\$650	—	Feb. 22, 1862	Liverpool Point
Martin Hoffman ¹	Cons. Coal & Transp.	\$350	—	Feb. 22, 1862	Liverpool Point
A. C. Blackman	Charles Wenner	\$1,300	—	Feb. 27, 1862	Georgetown
Liberty ¹	Martin Smith	\$800	—	Feb. 22, 1862	Liverpool Point
Prince Rupert ¹	Martin Smith	\$800	\$4	Feb. 22, 1862	Georgetown
Col. Dinlop	Charles Weinner	\$1,150	\$5	Feb. 17, 1862	Georgetown
Lauretta	D. Spates	\$800	\$4	Feb. 21, 1862	Liverpool Point
Wila Kate	Cons. Coal & Transp.	\$650	—	Feb. 22, 1862	Liverpool Point
Jas. Buchanan	R. B. Carlisle	\$1,000	\$5	Feb. 18, 1862	Georgetown
Lloyd Lowe	Pat Brady	\$800	\$5	Feb. 18, 1862	Georgetown
Jno. A. Rinehart ¹	S. Weston	\$900	\$4	Feb. 22, 1862	Liverpool Point
Sir Jno. Franklin ¹	Owen Ardinger	\$450	\$5	Feb. 20, 1862	Liverpool Point
Georetta Ardinger	Henry Arts	\$1,000	\$6	Feb. 21, 1862	Georgetown
F. Benton ²	Not Known	\$1,000	—	Feb. 20, 1862	Liverpool Point
R. Gregory ¹	Not Known	\$800	—	Feb. 20, 1862	Liverpool Point
Jno. R. Wilson	Hamilton Douns	\$250	\$5	Feb. 20, 1862	Liverpool Point
R. M. Borden	Charles McCarlde	\$1,000	—	Feb. 20, 1862	Fortress Monroe
Elie Wade	Not Known	\$400	—	Feb. 26, 1862	Discharged & Gone up the Canal

¹ Blst. Plaster² Blst. Stone

Document in Spates Papers

**HISTORIC RESOURCE STUDY
CHESAPEAKE & OHIO CANAL NHP**

12.

**LOCKKEEPERS
AND BOATMEN
ON THE C & O CANAL**

**BY HARLAN D. UNRAU
HISTORIAN, C&O CANAL RESTORATION TEAM, SENECA
DENVER SERVICE CENTER
1976**

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I. THE LOCK KEEPERS

A. INTRODUCTION

From the earliest period of navigation on the canal in the fall of 1830, the administration organization of the line was a mere formality, because the board of directors retained too much authority for itself. As a result, the character and conduct of the superintendents were not as important in the operation of the canal as they might have been. In the absence of an effective line of authority, the character of the lock keepers became important to the welfare of the canal. On the basis of what little is known of the lock tenders, they do not, as a group, seem to have been outstanding for their enthusiasm or reliability. Despite the important role which devolved upon them in the course of the directors' conduct of canal administration, apparently little was done to upgrade the quality of their services.¹

B. DUTIES AND COMPENSATION

Several months before the canal was watered between Dams Nos. 1 and 2, the board authorized President Charles F. Mercer to nominate lock keepers for the line and determine the rate of compensation for those individuals. The annual wages of the tenders were not to exceed \$150 for a single lock, \$200 for two locks, and \$250 for three locks.²

On August 7, 1830, Mercer recommended various individuals to serve as lock keepers and the rate of compensation each was to receive. As the company was beginning to experience its first financial difficulties, the pay of the tenders was considerably less than the maximum allowances earlier set by the board. The decrease in wages, however, was to be partially compensated for by allowing the tenders to use company land for gardening purposes. The keepers and their compensation, which were approved by the directors, were:

Lock No. 5.—Whalen, keeper; compensation of \$100 and use of Lockhouse No. 3. Together with the use of the company's ground below Guard Gate No. 1 and the embankment connecting it with the towpath of the new canal in its vicinity.

Lock No. 6—William Conner, keeper; compensation of \$100 and use of Lockhouse No. 4 together with the use of the company's ground between, at, next above, and below Dam No. 1 as far down as the guard gate and embankment.

Lock No. 7—Robert Brooke, keeper; compensation to be the use of the lands between the canal and the river and such islands as had been purchased for the company from George French together with the use of Lockhouse No. 5.

Lock No. 8—Solomon Drew, keeper; compensation of \$100 and the use of the Lockhouse No. 6.

¹. Walter S. Sanderlin, *The Great National Project: A History of the Chesapeake & Ohio Canal*, (Baltimore, 1946), 185

² *Proceedings of the President and Board of Directors*, B, 135. When compared with the wages being paid to the skilled and unskilled laborers then at work on the construction of the canal, the wages of the tenders appear to be rather low considering their responsibilities. The average wages for the unskilled workers on the line in the early 1830s were \$13 per month (based on 26 working days), while those of skilled artisans were as much as \$20 per month. Using a 9-month construction season as a basis, these figures would translate into annual wages of \$117 for unskilled workers and \$180 for skilled laborers.

Locks Nos. 9-10—Thomas Burgess, keeper; compensation of \$150 and the use of Lockhouse No. 7.

Lock No. 11—(Mr.) Edmonston, keeper; compensation of \$100 and the use of Lockhouse No. 8.

Locks Nos. 12-14—Charles L. Sears, keeper; compensation of \$200 and the use of Lockhouse No. 9.

Locks Nos. 15-16—(No name given), keeper; compensation of \$200 and the use of Lockhouse No. 10.

Locks Nos. 17-18—William Roberts, keeper; compensation of \$200 and the use of Lockhouse No. 11.

Locks Nos. 19-20—William Roberts, keeper; compensation to be the use of Lockhouse No. 12 together with the use of the company's ground between the canal and the river that had been purchased from Moreen D. Loper and the Beall heirs.

Lock No. 21—(Mr.) Fuller, keeper; compensation of \$50, the use of Lockhouse No. 13, and the use of the company's land bought from William Scott.

Lock No. 22—(Mr.) Wright, Keeper; compensation of \$100, the use of Lockhouse No. 14, and the use of the company's land lying between the canal and the river below Muddy Branch.

Lock No. 23 and Guard Lock No. 2—Lewis Sewell, keeper; compensation to the use of Lockhouse No. 15 together with the use of Long-Acre and the company's ground between the canal and the river as far up the river as within 100 yards of Lock No. 24.³

In September the board approved a resolution requiring that at least one acre be attached to each lock for the use of the tender. On their plot the tenders were to raise gardens for their supply of fresh vegetables and to raise chickens, hogs and cows for their supply of eggs, milk, and meat.⁴ The grounds set aside for these purposes were to be fenced with materials taken from company shanties that were to be dismantled near Dam. No. 1.⁵

Several weeks after the water had been admitted into the canal between Locks Nos. 5 and 23, the board made a change in one of the appointments and took the first steps toward a formal definition of the lock tenders' duties. On November 20 W. W. Fenlon, who already had applied for permission to commence a packet service between Georgetown and Great Falls, was confirmed as the keeper of Locks Nos. 15-20, since William Roberts had declined taking charge over his assigned locks. At the same time, the board directed Mercer to instruct the new tenders in the

³ *Ibid.*, B, 157-59.

⁴ *Ibid.*, B, 188.

⁵ *Ibid.*, B, 148. Later, as lock houses were built further up the valley, the board specified that the lots around the structures be fenced with "good post and rail fences." Whenever possible, locust posts were to be used. *Ibid.*, E, 47, and Ingle to Elgin, Apr. 22, 1836, Ltrs. Sent, C & O Co.

proper manner of operating the locks. Moreover, each lock keeper was to be supplied with tools that were to be used for the preservation and repair of the portion of the canal under his care.⁶

Less than a week later, the board determined to make some special arrangements with Fenlon for having taken charge of Locks Nos. 15-20. In addition to a salary increase to \$400 per year, Mercer was authorized to spend \$200 for the addition of a kitchen to Lockhouse No. 12, \$500 for an additional building, and \$100 for other outhouses. These outlays would enable Fenlon to establish a hotel at Great Falls, which was soon named Crommelin House. Within eight months it was decided to make further improvements to Fenlon's hotel at company expense, the principle projects being the outside plastering of the lockhouse, the construction of a second story, and the erection of a porch in front of the stone center portion of the house.⁷

Similar improvements were also made to the lockhouse at Seneca Falls. The sum of \$1,000 was authorized in July 1830 for additions to this structure, which was named Rushville. Peyton Page was named as the new lock tender as well as the new boat registrar at that location in March 1831 at a yearly wage of \$250.⁸

The following June the board authorized President Mercer to appropriate eight per cent of the tender's annual salary for the construction of stables and a tavern near the lockhouse. The outbuildings were not to exceed the sum of \$300, and they were to be rented by the tender.⁹

Mercer informed the board on July 1, 1831, that he had found it necessary to increase the wages of the lock keepers. Accordingly, he had raised their pay to the maximum limits set by the directors on July 7, 1830.¹⁰

On July 16 Mercer submitted to the board a draft of the regulations for the lock keepers and the boatmen, which he had been ordered to prepare several months earlier. The regulations for the lock tenders' districts and listed the duties that the tenders were expected to perform as follows:

DISTRIBUTION OF THE CHESAPEAKE & OHIO CANAL,
FOR THE PURPOSES OF NAVIGATION, INSPECTION,
AND REPAIRS, INTO LOCK KEEPERS DISTRICTS.

The first Lock-keeper's District shall extend from the eastern termination of the Canal in Washington, to the waste weir next above the old locks at the Little Falls of Potomac, and shall include the basin between Georgetown and Washington, as well as those locks.

The second Lock-keeper's District shall extend from the first, as high up as to include the waste weir next above the United States powder magazine, and shall also include the dam and feeder at the Little Falls.

The third Lock-keeper's District shall extend from the second, to the lower end of the external slope of protection wall next above the culvert over Cabin John Run.

The fourth Lock-keeper's District shall extend from the third district, to the first culvert above his dwelling house.

The fifth Lock-keeper's District shall extend from the fourth, to the waste weir through the berm of the canal next below the entrance of the Rocky Run Feeder.

⁶ *Ibid.*, B, 224-225. C, 401, and Fenlon to Board of Directors Nov. 6, 1830, Ltrs. Recd., C & O Co.

⁷ *Proceedings of the President and Board of Directors*, B, 238, 245, 307, 383-84.

⁸ *Ibid.*, B 148, 290, 383.

⁹ *Ibid.*, B, 384.

¹⁰ *Ibid.*, B, 396-97

The sixth Lock-keeper's District shall extend from the fifth, to the lower end of the first high vertical protection wall above, and shall embrace Rock Run Dam and Feeder.

The seventh Lock-keeper's District shall extend from the sixth to the lower end of the first external slope or protection wall above the Great Falls of Potomac.

The eighth Lock-keeper's District shall extend from the seventh, to the first high bluff above the culvert over Watt's branch.

The ninth Lock-keeper's District shall extend from the eighth, to the lower end of the first external slope or protection wall above the culvert over Muddy Branch.

The tenth Lock-keeper's District shall extend from the ninth, to the upper end of the external slope or protection wall next above the Seneca Aqueduct.

If a District Lock-keeper shall, at any time, discover, that any of the works on the Canal, within his district, are out of repair, he shall immediately report the fact in person or by express, which, for that purpose, he is authorized to hire, to the Superintendent of repairs, and if from the nature of the repairs required, or of the damage apprehended, time be not allowed without farther injury to the Canal or its appurtenances, to wait the orders of the Superintendent, the Lock-keeper shall consider himself empowered, and he is required, at the cost of the Company, to take immediate steps, in the absence of the Superintendent, to repair the injury which has happened, or to prevent that which is apprehended. Of all expenses so incurred by him, for the benefit of the Company, he shall keep a fair account, a copy of which, he shall hand over to the Superintendent, as soon as his presence shall enable him to take charge of such repairs, the Superintendent shall repay to the Lock-keeper, the sums so expended. All such accounts shall be settled as soon as practicable, after they arise, and, at least, once in every month.

No Lock-keeper shall be entitled to receive his monthly pay, who shall have an unsettled account with the Company.

The District Lock-keepers shall be bound, if required, to provide by themselves, or their assistants, accommodation and subsistence, at a reasonable rate, not to exceed a given sum per week, for the Superintendent, and such hands or laborers as may be engaged in such repairs, or on any improvements upon, or alterations of the Canal.

Each Lock-keeper and Lock-keeper's assistant shall be furnished with 2 wheel-barrowes, 3 shovels, a pick and a crow-bar, to be used in the improvement and repair of the Canal, whensoever required, and shall be held responsible for the good order and safe keeping of the same; and each District Lock-keeper, in his monthly return to the board, shall state the number and condition of the tools within his District.

In addition to his monthly pay, each District Lock-keeper shall be entitled to an enclosed lot, near his house.

Every Lock-keeper shall be at liberty, subject to the restraints and regulations of the existing laws, to accommodate the boatmen, and other travelers at his lock house, provided that under no circumstances whatever, shall any Lock-keeper, or his assistant, be allowed to sell or to supply on any terms, to any boatmen, traveler, or other person, any spirituous, or intoxicating liquor, or to allow the use or consumption of any such liquor within or upon his premises, unless particularly authorized so to do by the President and Directors of the Company; and for any violation of this rule, the offender shall be immediately discharged from the service of the Company.

In like manner any District or Assistant Lock-keeper, who shall at any time be found in a state of intoxication, shall be forthwith discharged.

Every District Lock-keeper, and his assistant, shall afford to the boatmen and all other persons navigating the canal, every aid and accommodation in his power, while he

duly enforces the regulations for the protection of the Canal and its works—he shall instruct the boatmen how to navigate the Canal, to the best advantage, and especially to what part of their boat they should attach their tow or tracking line; how to track it with most comfort to themselves, and especially the manner of entering and passing out of the locks, and the use of their bow and stern strapping or snubbing ropes.

Every District Lock-keeper having reason to suspect a boat or float to have increased her cargo subsequent to the date of her waybill, is authorized to call upon the owner, master, or other person having charge of said boat or float for a sight of his waybill, to compare with the actual cargo of such boat, and if any augmentation of such cargo shall appear to have been made, subsequently to the date of the permit or waybill, to endorse a notice hereof, on such waybill, for the information of the Collector, and the other Lock-keepers.

All boats or floats left by their owners, or such persons as may have had charge thereof, either sunk in the canal or loosely floating thereupon, and all floating logs, planks or branches of trees, as well as other nuisances within the Canal, the Lock-keeper of the district within which the same may be, shall promptly cause to be removed or abated.

Every District Lock-keeper is required to pay particular attention to the orders regulating the height of water in the several levels between the locks of his district; and the Lock-keepers of the eighth and ninth districts, may be required to receive their orders through the Lock-keepers of the seventh or of the tenth district; and in like manner those of the second, third, and fourth, through the Lock-keepers of the first or fifth district.

In all cases, where practicable, the various levels shall be regulated by the use of the wastes and feeders of the Canal, reserving the side culverts and paddle gates of the locks for their appropriate use – that of filling and emptying the locks when required by the passage of boats.

Each District Lock-keeper shall see that obvious and suitable marks, by description stones or boards, be kept up, above and below each lock, to denote where a boat approaching the same, shall slacken its speed or await its turn for entering the Lock, if other boats have a right to precede it.

No Lock-keeper is authorized to practice himself, or to countenance others, in resisting, by violence, except in self-defense, any outrageous or disorderly conduct on the canal, but he shall take, at the cost of the Company, prompt measures to suppress and punish the same, by the judicial tribunals having cognizance thereof.¹¹

When the canal was opened to navigation between Lock No. 5 and the Rock Creek Basin in September 1831, the board drew up a special set of rules for the keeper of Locks Nos. 1–4 as that position was crucial to the functioning of the waterway at its terminus. The duties of the Georgetown lock tender, in addition to the printed regulations for all lock keepers, were:

1. He was to have charge of Locks Nos. 1–4 and Tidelock A as well as supervisory responsibility for Lock District No. 1.
2. He was to hire two able-bodied assistants.
3. He was to “attend in Person” to his duty and was never to leave his district without permission from the president or board.

¹¹ *Ibid*, B, 314, 421–28.

James O'Reilly was appointed to fill this position, and he and his assistants were to receive an annual wage of \$500.¹²

From time to time additional duties were assigned to those lock tenders who were respected for their industriousness and consciousness, O'Reilly was authorized to undertake the duty of collecting tolls on boats which passed up the canal from Georgetown but did not use the Old Locks at Little Falls. The compensation for this job was \$100 per year.¹³

In March 1832, the lock keeper at Lock No. 5 was authorized to examine the waybill of every boat ascending through his lock to insure that the captain had paid all his tolls on his last descent to Georgetown. He was to receive \$50 per year for this additional work.¹⁴

As the canal extended westward, similar arrangements were made with the lock tenders at Harpers Ferry, Williamsport, and Hancock to act as toll collectors.¹⁵

From October 1834 to October 1837 the Georgetown lock keeper was assigned the additional duty of operating Tidelock B on the Washington Branch Canal for which job his salary was increased, to \$1,200 per year.¹⁶

Some lock tenders were made responsible for the operation of pivot bridges at their locks, one such ease being the keeper¹⁷ at Lock No. 30 who received an additional monthly stipend of \$10 for his extra work.

After the canal was completed to Cumberland in 1850, the directors approved new locks nearest to the guard or river locks were generally placed in charge of the operation of those structures along with an increased annual salary of \$50.¹⁸

Regulations to govern the administration of the waterway. The new rules, which went into effect on April 1, 1851, defined the duties of the lock keepers as follows:

LOCK KEEPERS

128. It shall be the duty of all lock keepers to make a daily and particular examination of the locks under their charge, and of any other works which they may be directed, by order of the General Superintendent or of the Superintendents of repairs on whose division they are, to attend to; and to prevent by all lawful means within their power, any injury to said locks or other works, from the carelessness of boatmen or from malicious or disorderly persons.

129. They shall use their utmost exertions to keep the said locks or other works in the best possible order, and in case of any accident or injury to them, or to the canal in the vicinity of their stations, requiring immediate attention, they shall take the necessary measures to remedy the same and to prevent further injury; and in the meantime to send the earliest intelligence thereof to the Superintendent of repairs on that part of the canal.

¹² *Ibid.*, C, 5-6.

¹³ *Ibid.*, C, 112-13.

¹⁴ *Ibid.*, C, 113. As long as the canal had its terminus at Dam No. 2, the tender at Lock No. 23 also was designated as a toll collector.

¹⁵ *Ibid.*, G, 149-50.

¹⁶ *Ibid.*, D, 181. In Oct. 1837, the lock house at the tide lock was completed and John Hilton was appointed as its tender at a yearly wage of \$50. *Ibid.*, E, 329.

¹⁷ *Ibid.*, M, 102.

¹⁸ *Report to the Stockholders on the Completion of the Chesapeake & Ohio Canal to Cumberland* (Frederick, 1851), 139-40.

130. It shall be their duty, at all hours, by night as well as by day, unless otherwise ordered by the General Superintendent or Superintendent of repairs on that part of the canal, to pass all boats and floats presenting themselves at their locks, and entitled to pass the same under the regulations of the Company.

131. They shall not permit the boatmen to pass their boats or floats through any lock, except in the presence and under the direction of the keeper thereof or his assistant.

132. The lock keepers shall not absent themselves from their locks, on any occasion, without leave from the Superintendent of repairs on that part of the canal. They shall reside in the houses provided for them, at their respective stations; and shall be charged with the care and preservation of their respective houses and of the enclosures attached thereto; and also of any property of the Company that may be put in their keeping by the General Superintendent or the Superintendent of repairs on that part of the canal; and for any injury to the said house or enclosures or the said property, if occasioned by their neglect or carelessness, they shall be, respectively, liable.

133. Lock keepers, when repairs are making in the neighborhood of their locks, at points where, and at times when, there is difficulty in obtaining board and lodging for those persons employed upon such repairs, shall afford such accommodation, in the way of boarding and lodging, the whole or a part of the said persons, at fair and usual rates, as in the opinion of the Superintendent of repairs of that part of the canal, he can reasonably and with propriety be asked and required to afford.

134. Although, under these regulations, the lock keepers are, in many cases, authorized to impose fines; yet, except in cases of emergency, it is desired that they should forthwith report each violation of a regulation to the Superintendent of repairs on that part of the canal, with all the facts in the case, in order that the fine may be imposed by the said Superintendent; and that such other measures in relation to the said violation may be taken as in the judgment of the said Superintendent may be thought necessary.

135. All fines imposed by lock keepers shall be forthwith reported to the Superintendent of repairs on that part of the canal; and all moneys received by them for fines imposed by them shall be immediately paid over to the said Superintendent.

136. Any lock keeper who shall knowingly permit a boat or float to pass his lock or locks in violation of any provision of these regulations; or who shall himself neglect or refuse to comply promptly, with any one of such of these regulations as prescribes his duties, either towards the Company or those engaged in boating on the canal, shall be forthwith suspended from duty by the Superintendent of repairs on that part of the canal, on his becoming cognizant of the facts; and a report of the case shall be immediately made to the General Superintendent, by the said Superintendent, for his action thereon; and in the meantime the said Superintendent may appoint some person to fill, temporarily, the vacancy thus created.

137. Every lock keeper shall perform such other duties connected with the canal, as the General Superintendent may from time to time require of him.¹⁹

These regulations continued in effect with periodic slight modifications until the canal went into a receivership after the titanic flood of 1889.

The basic annual wages of the lock keepers remained generally unchanged from 1831 to 1853.²⁰

¹⁹ *By-Laws, Rules, and Regulations: In force on the Chesapeake & Ohio Canal, 1st April 1851* (Baltimore, 1894), 39–40.

On May 7 of the latter year, the board ordered that the tenders be paid annual salaries according to the following salary schedule beginning on June 1:

Locks Nos. 1-4	\$600
Lock No. 23	\$250
Lock No. 5	\$300
Lock No. 24	\$200
Lock No. 6	\$200
Lock No. 25	\$250
Lock No. 7	\$200
Lock No. 26	\$200
Lock No. 8	\$200
Lock No. 27	\$200
Locks Nos. 9-10	\$300
Lock No. 28	\$200
Lock No. 11	\$200
Lock No. 29	\$225
Lock No. 12-14	\$325
Lock No. 30	\$200
Lock No. 15	\$200
Lock No. 31	\$200
Lock No. 16	\$200
Lock No. 32	\$225
Locks Nos. 17-18	\$300
Lock No. 33	\$200
Locks Nos. 19-20	\$300
Lock No. 34	\$200
Lock No. 21	\$200
Lock No. 35	\$325
Lock No. 22	\$200
Lock No. 37	\$200
Lock No. 38	\$250
Lock No. 57	\$200
Lock No. 39	\$200
Lock No. 58	\$200
Lock No. 40	\$200
Lock No. 59	\$200
Guard Lock No. 4	\$200
Lock No. 60	\$200
Locks Nos. 41-42	\$300
Lock No. 61	\$200
Lock No. 43	\$200
Lock No. 62	\$200
Lock No. 44	\$200

²⁰ During this period, the average annual wages for a skilled factory worker in the North (based on a 7-day week of 12-14 hour days) ranged between \$200 to \$500. Unskilled workers, women, and children received annual wages ranging from \$50 to \$300. When compared with these figures, the majority of the lock tenders received annual wages that put them in the middle of the unskilled working class. T. Harry Williams, Richard N. Current, and Frank Freidel, *A History of the United States to 1877* (3rd ed., New York, 1969), 464-65.

Lock No. 63 1/3-66	\$400
Guard Lock No. 5	\$200
Lock No. 67	\$200
Locks Nos. 45-46	\$300
Lock No. 68	\$200
Locks Nos. 47-50	\$400
Locks Nos. 69-71	\$400
Locks Nos. 51-52	\$300
Lock No. 72	\$200
Lock No. 53	\$200
Locks Nos. 73-74	\$275
Locks Nos. 54-55 and Guard Lock No. 6	\$300
Guard Lock No. 8	\$250
Lock No. 56	\$200 ²¹

From May 1853 to September 1859 when another general pay increase went into effect there were a few modifications in the salaries of some lock tenders that were the result of special circumstances. In reply to a complaint from Samuel Morany, the tender of Locks Nos. 47-50, that his pay was too low to employ an assistant, the board agreed in January 1855 to increase his yearly stipend to \$500.²²

In May 1855 the directors granted John Shelly, the tender at Lock No. 70, a yearly wage increase to \$225 because the company owned no ground at the lock house on which he could plant a garden.²³

As the canal trade had increased to the point that the keeper at Lock Nos. 63 1/3, 64 2/3, and 66 needed to hire additional assistance, the directors in September 1855 allowed him a monthly increase of up to \$20 at the discretion of the Superintendent of the Cumberland Division.²⁴

For undetermined reasons, the annual salaries of the keepers at Lock No. 12 and at locks nos. 13-14 were raised drastically in October 1860 to \$300 and \$400 respectively.²⁵

During the next decade the pay of the lock keepers rose rapidly. On May 1, 1864, another salary increase went into effect as follows:

Locks 6-62, 67-72, 75	\$5 per month
Locks 63 1/3, 64 2/3, 66	\$600 per year
Locks 73 and 74	\$500 per year
Guard Lock 8	\$400 per year ²⁶

The following month the tender of Lock No. 5 and Guard Lock No. 1 was given a \$60 per year raise.²⁷

²¹ Iron to Lambie, May 7, 1853, Ltrs. Sent, C & O Co.

²² *Proceedings of the President and Board of Directors*, I, 140.

²³ *Ibid*, I, 169.

²⁴ *Ibid*, I, 446.

²⁵ *Ibid*, K, 131.

²⁶ *Ibid*, K, 383.

²⁷ *Ibid*, K, 390

As of June 1, 1865, the pay of the keepers at Locks Nos. 9-10, 13-14, 17-18, and 19-20 was increased to \$50 per month.²⁸

In August 1865 this rate increase was extended to all tenders of two locks along the canal.²⁹

The final general pay increase of which there is any record took effect on May 1, 1870, when the pay of all tenders of single locks was raised to \$50 per month and that of all keepers of two locks was increased to \$75 per month. Along with this last pay increase the board passed a resolution requiring each single lock keeper to hire one assistant and each double lock tender to employ two assistants.³⁰

C. FAMILY AND SEXUAL ROLES

The canal company never set down written criteria for the qualifications of lock keepers. However a cursory review of the company records indicates that the directors preferred married men with large families. It was presumed that married men would provide more responsible service along the numerous isolated stretches of the canal than would those who were single. Large families were favored both because of their stabilizing tendencies and because they provided more hands to do the work. A large number of children was also an advantage to those lock keepers who were responsible for more than one lock, because their older offspring could be put to work operating the locks, thus relieving the tender of the need to hire an assistant.³¹

At times women held the position of lock keeper but these generally were the widows of the original tender. In March 1835 the board decided that all women lock keepers would be discharged after May 1, in the interest of more efficient operation.³²

The employment of women violated the general social mores of that era, but even more important, the physical strength and endurance necessary to operate a lock was thought to be better suited to men.

There were a number of exceptions made to the ruling, which banned female lock tenders, as a number of women served in this capacity during the operation of the canal. In response to an entreaty from Mary Ross to be continued as the tender of Locks Nos. 12-14, the board voted in March 1835 to suspend its order in her case.³³ The following month the directors agreed to keep Elizabeth Burgess as the tender of Lock No. 11, provided that she hires a capable assistant.³⁴

On the death of her husband in September, Mrs. Eliza Page was appointed temporarily as the registrar and lock keeper at Rushville. When she refused to act any longer as the registrar or lock-keeper in October the board voted to abolish the office of registrar at that place and to employ a lock tender on a temporary basis.³⁵

The unpleasant experience with Mrs. Page caused the board that same month to reissue its order banning the employment of women as lock keepers after March 1, 1836.³⁶

²⁸ *Ibid*, K, 426-27.

²⁹ *Ibid*, K, 438, and Ringgold to Masters, Aug. 15, 1870, Ltrs. Sent, C & O Co.

³⁰ *Ibid*, L, 314-15. This salary increase did not apply to the tenders of the Georgetown locks or the Cumberland Lock.

³¹ Sanderlin, *The Great National Project*, p. 185.

³² *Proceedings of the President and Board of Directors*, D, 264.

³³ *Ibid*, D, 267.

³⁴ *Ibid*, D, 273.

³⁵ *Ibid*, D, 401, 416.

³⁶ *Ibid*, D, 421.

"Despite the new directive the board continued to make exceptions based on the circumstances of each case. On March 30, 1836, it was determined to continue the employment of Mrs. Susan Cross as the tender of Lock No. 21 "until the 1st day of May, and no longer."³⁷

One of the most interesting cases in which a woman was appointed as a lock tender occurred in December 1842 after the drowning of James O'Reilly, the highly-respected keeper of the Georgetown locks since 1831. On the morning of December 14 O'Reilly's body was found in the opening of the culvert gate of Lock No. 3, presumably having fallen into the canal while turning the crank about 7 O'clock A.M. John Y. Young, the division superintendent, immediately hired Philip Gormly, who lived near Lock No. 4, as a temporary replacement. O'Reilly's assistants and his oldest son were continued as aides to Gormly.³⁸

That same day Clement Cox, an influential Georgetown resident, informed the board that O'Reilly had left a large family of females and small children. His oldest son, James, Jr., however was 25 to 30 years old, well educated, and "entirely exemplary in his habits." Although the young man had been known formerly as a wild brawler, he had served as secretary of the Temperance Society of his church for nearly three years. As he would now be the sole bread-winner for the family, Cox urged that he be given the lock keeper's job.³⁹

The board also received a petition signed by 21 boat owners and captains and Georgetown citizens recommending O'Reilly's widow as the lock tender. In the opinion of the signers of the memorial, such an act would be a fitting tribute to "a most worthy citizen and honest man." With the aid of her eldest son, the petitioners were convinced that Mrs. O'Reilly would render credible service to the company.⁴⁰

Accordingly, the board appointed Mrs. O'Reilly as her husband's successor on December 20.⁴¹

There were other exceptions to the ruling against the employment of female lock tenders in the following years. In April 1844 Mrs. James Davis was appointed to succeed her deceased husband as the keeper at Lock No. 28.⁴²

Four years later in April 1846 the board was notified that Asa Farman, the keeper of Locks Nos. 12-14, had died, leaving a widow and six children. Although Rebecca Farman continued to operate the locks with the aid of a brother and two of her sons, the board felt that she could not handle three locks. Accordingly, she was transferred to Lock No. 15, and Hezekiah Metts, the operator of that lock replaced her as he had "sufficient assistants."⁴³

In 1848 Mary A. Brewer took over as tender of Lock No. 16 for her deceased husband Thomas. That same year Sarah Conner replaced her late husband Hugh as keeper of Lock No. 53, a post which he had held since April 1839 when the canal between Dams Nos. 5-6 was opened to navigation.⁴⁴

In 1850 there were two female lock tenders listed on the canal company payroll. Lucy A. Metts, the widow of Frederick Metts, operated Lock No. 5 and Guard Gate No. 1 until March 10,

³⁷ *Ibid.*, E, 36.

³⁸ Young to President and Directors, Dec. 14, 1842, and Cox to Ingle, Dec. 15, 1842, Ltrs. Recd, C & O Co.

³⁹ Cox to President and Directors, Dec. 14, 1842, Ltrs. Recd., C & O Co.

⁴⁰ Petition to President and Directors of the Chesapeake & Ohio Canal Company, Dec. 18, 1842, Ltrs. Recd., C & O Co.

⁴¹ *Proceedings of the President and Board of Directors*, F, 512.

⁴² *Ibid.*, G, 146

⁴³ Elgin to Coale, Mar. 5, 1846, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, G, 397-98.

⁴⁴ *Twentieth Annual Report* (1848), C & O Co., Appendix E, 26-27.

at which time she was transferred to Lock No. 16 for the remainder of the year. Sarah Connor was still at her post at Lock No. 53.⁴⁵

Company records indicate that at least five women served as lock tenders during the 1860s and the 1870s. After a change in the canal's administration in June 1860, the new board replaced all of the waterway's lock keepers. Two of the new appointees were Mrs. Adeleade Hill at Lock No. 12 and Mrs. Egan at Lock No. 60.⁴⁶

In November 1864 it was reported that John Rench, the keeper of Lock No. 30, had died and that George Hardy, the tender of Locks Nos. 35 and 36, had been drafted into the Union Army. In both cases, the women and children remained to attend the locks.⁴⁷

On the death of G. W. Case, the lock keeper at Great Falls, the board appointed his widow to succeed him in August 1872.⁴⁸

D. PERFORMANCE RECORD

Despite the precautions taken by the board in selecting the lock tenders, a cursory review of the company records reveals that many of the lock men were undisciplined and irresponsible. Although most were conscientious in their work, many were dismissed for drunkenness, neglect of duty, and absence without notice or without providing a substitute. Frequent complaints were made about the sale of liquor by lock keepers to boatmen and workers, and the disorderly results of this practice.

The formulation of detailed regulations and the organization of canal employees with assigned duties did not insure the orderly operation of the work. On the contrary, every conceivable abuse was reported at one time or another. Canal property was misused, tools were lost or stolen, repair materials were damaged or stolen, and the towpath and aqueducts used as a wagon roads and bridle paths. Repeated directions to the lock keepers to enforce the rules strictly indicate a laxness or indifference on the part of the tenders and boatmen alike.⁴⁹

There were general complaints about the performance of the lock tenders almost from the first day of navigation. In May 1831 an article appeared in the *National Intelligencer* describing an excursion to Great Falls on a packet boat. The reports noted that the "hands at some of the locks are not as dexterous in the management of them perhaps as longer practice will make them." Thus, the passenger who was "not on his guard may chance [to] get a jolt or two."⁵⁰

By the spring of 1832, the directors had become alarmed by the numerous reports of the irresponsibility and negligence of the lock tenders. On March 24 they ordered the Superintendent to interview each lock tender "to ascertain them that are acquainted with the extent of their respective districts and the various duties required of them." He was to report to President Mercer "the name of every lock keeper, whom he shall find, upon examination, to be ignorant of his duty or in any way negligent or remiss in its performance." Furthermore, the directors ordered him to "especially instruct" the lock tenders to make daily or weekly inspections of the embankments on both sides of the canal, within their respective districts in order to ascertain whether any leak exists or is threatened in any part thereof; whether any musk rats have made lodgments therein, and if any, the entrance of habitations...to pass thro' the several viaducts or culverts of the canal

⁴⁵ *Report to the Stockholders on the Completion of the Chesapeake & Ohio Canal to Cumberland*, 139–40.

⁴⁶ *Proceedings of the President and Board of Directors*, K, 192–93.

⁴⁷ *Ibid.*, K, 405.

⁴⁸ *Ibid.*, M, 49.

⁴⁹ Sanderlin, *The Great National Project*, 185–186.

⁵⁰ Washington *National Intelligencer*, quoted in Niles' Register, XL (May 21, 1831), 206.

within their district...or...by looking thro' the same, whether any leak exists thereon, and that, where any such leaks are discovered, they be promptly stopped or effectual measures be taken to prevent their enlargement.⁵¹

After several locks had been damaged in the spring of 1833 as a direct result of the negligence of the lock tenders, the board took further action to impress those individuals with the importance of enforcing the company's regulations. In June the directors determined that each of the lock keepers be "distinctly informed" that they would henceforth.

be held responsible for any damage done his lock, by violently entering the same, or using iron pointed poles, while in the same, unless in each case of injury he report the number and description of the boat, by which such injury is occasioned; and when practicable, the name or names of the person or persons, having the same in charge, to the Collector in Georgetown, before the boat shall have returned thro' his lock. In like manner, he shall be held responsible for any injury done, by any boat to the gates, or pointing or projecting stone of his lock: and the cost of repairing such injury, shall in each case, be deducted from his next month's wages.

The directors put "teeth" into this directive by requiring that the superintendent would henceforth certify that the locks were in "good order" each month before the lock tenders were paid.⁵²

Throughout the years of the canal's operation, the board frequently had to direct the lock tenders to enforce the rules of the company, often with the threat of dismissal if they refused to cooperate. In June 1833 the lock tenders were ordered to prevent any sharp-pointed scow from entering the canal after July 1 – this despite the fact that such a regulation had been in effect for nearly two years.⁵³

The following month the directors were notified that there was "a regular travel of all kinds of carriages on the towing path" and also "crossing on the coping of the Monocacy Aqueduct," both of which were violation of company regulations resulting in part from the laxness of the lock keepers and in part from the antagonistic attitudes of the local residents.⁵⁴

An accident at Lock No. 44, in which \$60 worth of flour was lost through the negligence of the lock tenders led to an edict in June 1836 which stipulated that the tenders would be held responsible for all damages to boat cargoes which resulted from their "neglect of duty".⁵⁵

In December 1837 the president of the Frederick and Harper's Ferry Road Company complained to the canal board that persons traveling on the turnpike were avoiding tolls by crossing the pivot bridge at Lock No. 31 and using the towpath for the distance between the lock and Harpers Ferry. Anxious to cooperate with the road company as well as to protect its works, the lock keeper was ordered to enforce the company rules and to prohibit persons from crossing the

⁵¹ *Proceedings of the President and Board of Directors*, C, 111. As an inducement for the lock tenders to rid the canal of the muskrat problem, the board ordered the superintendent to pay a bounty of 25 cents for every such animal, which was killed on the canal, in its embankments, or in the riverside of the waterway.

⁵² *Ibid*, C, 368–69.

⁵³ *Ibid*, C, 392.

⁵⁴ Elgin to Directors, July 10, 1833, Ltrs. Recd., C & O Co. Within two weeks, the board ordered that posts be placed on the towpath to prevent carriages from using the aqueduct. *Proceedings of the President and Board of Directors*, C, 401. A similar problem occurred in September 1841 when Thomas Dawson of Montgomery County continued to use the towpath as a road for his carts and wagons. Elgin to Directors, Sept. 15, 1841, Ltrs. Recd., C & O Co.

⁵⁵ *Proceedings of the President and Board of Directors*, E, 69.

bridge unless they were on canal business or were passing to or from Caspar Wever's Mill for whose immediate use the bridge had been constructed.⁵⁶

When the board received word that many lock keepers and toll collectors were permitting boats to pass through their locks without certifying the manifests of their cargoes, it notified those individuals at Georgetown, Williamsport, and Hancock in April 1844 that such future violations would be grounds for dismissal.⁵⁷

Frequent complaints that some of the lock tenders were refusing to pass boats through the locks at night aroused an angry board in February 1848 to order all the lock tenders to be responsible for such operations 24 hours a day.⁵⁸

Aside from specific orders and threats of dismissal for the irresponsible performance of the lock tenders, the board attempted several other solutions to upgrade the services rendered by those individuals. In January 1843 a form of agreement delineating the duties of the lock keeper and the prerogatives of the company to dismiss him for non-performance was drawn up by President James M. Coale and adopted by the board for use in all future employment matters.⁵⁹

On at least two occasions – August 15, 1849, and October 12, 1866 the board acted to increase the responsibility of the division superintendents by authorizing them to dismiss and replace any lock-keeper on their divisions for reasons of misconduct or negligence, providing that the directors were informed at their next meeting.⁶⁰

This approach was used since the board was far removed from the waterway and incidents reported to it at its monthly meetings were often investigated long after their occurrence, thus allowing the tenders to carry out a "cover-up" of their alleged misdeeds and thereby encouraging a lack of respect for the enforcement powers of the superintendents.⁶¹

At other times, the superintendents were directed to report any lock keeper who was not performing his duties.⁶²

E. DRUNKENNESS

Drunkenness among the lock tenders proved to be continuing problem for the board. One of the most notorious cases in which a lock tender was dismissed for drunkenness occurred in 1844. In April Ebenezer Steel, the owner of a warehouse near Locks Nos. 45–46, informed the board that John Herbert, the keeper of those locks, was drinking heavily. Herbert, who was an old man with a large family, countered these charges by arguing that Steel merely wanted his assistant, who had little to do other than receive periodic shipments of grain and flour, to be lock keeper so that he would not have to pay him wages. Moreover, Steel often did not provide a full statement of his shipments, and he could get away with even more dishonesty if Herbert was out of the way.⁶³

⁵⁶ *Ibid.*, E, 345; Thomas to Thomas, Dec. 15, 1837, Ltrs. Recd., C & O Co.; and Ingle to Elgin, Dec. 20, 1837, Ltrs. Sent, C & O Co.

⁵⁷ *Proceedings of the President and Board of Directors*, G, 150.

⁵⁸ *Ibid.*, H, 144–45.

⁵⁹ *Ibid.*, G, 2.

⁶⁰ *Ibid.*, H, 288, K, 520.

⁶¹ *Proceedings of Stockholders*, C, 592–94.

⁶² *Circular to Superintendents*, William R. Hutton, 1870, Ltrs. Recd., C & O Co.

⁶³ Herbert to President and Directors, April 10, 1844, Ltrs. Recd., C & O Co.

Later, a petition signed by 19 residents in the vicinity of the two locks was submitted to the board. Among other things, the petitioners noted that Herbert was an "attentive" and "faithful" lock tender who deserved to be kept on the job.⁶⁴

Following a short investigation of the case, Chief Engineer Charles B. Fisk recommended that Herbert be continued as lock tender and the board accepted the proposal.⁶⁵

Fresh charges of heavy drinking were again leveled against Herbert in August 1844. It was reported that he had left the locks under the charge of his son-in-law during a drunken spree in the middle of the month. After a similar report in November, the directors removed him from the payroll as of December 1 and selected Henry Harsh as his replacement.⁶⁶

There were other dismissals for drunkenness. In November 1844 it was reported that William H. Henderson, the keeper at Locks Nos. 17 and 18, was "intemperate in his habits, and guilty of neglect of duty." Among other complaints against him were charges that he was living alone, employing no assistants, and remaining absent from duty for days on end. Hence he was removed from his job as of December 1 and replaced by Horace Benton.⁶⁷

In March 1846 the board was informed that Robert C. Fields, the tender at Lock No. 21, had kept his level "very irregular at times, putting boats aground, while he (was) absent on his drunken frolics without permission of the Superintendent."⁶⁸

Accordingly, he was fired as of May 1 and replaced by Samuel M. Fisher.⁶⁹

F. NEGLECT OF DUTY

There are numerous instances where lock tenders were either warned or dismissed. One of the most serious incidents to occur as the result of a lock-tender's drunken behavior occurred on September 11, 1875, at Lock No. 22. Arriving late one night, the *Excelsior*, owned by Richard A. Moore, commenced locking operation with the aid of the tender. As the keeper was so drunk that he could "not act straight," he failed to heed the warnings of the boat's steersman and opened the lower gate paddles before the boat was in place. Hence the boat struck the mitre sill, broke apart, and sank with its 113-ton coal cargo. As a result, Moore collected more than \$1,300 in damages and the unnamed lock man was dismissed.⁷⁰

For neglecting their duties. In August 1837 Phinas Janney, one of the canal's directors, reported that recently he had crossed over the Potomac River from Shepherdstown to descend the canal. Although he had notified the keeper of the river lock of his approach, the tender did not arrive at the lock until the boatmen had locked the vessel through it and were ready to descend the canal. From other sources there appear to have been numerous instances where the tender had arrived at the lock too late to be of any service.⁷¹

⁶⁴ Petition to President and Directors, April 15, 1844, Ltrs. Recd., C & O Co.

⁶⁵ *Proceedings of the President and Board of Directors*, G, 146.

⁶⁶ *Ibid.*, G, 209-210, and Stone to Coale, Aug. 29, 1844, Ltrs. Recd., C & O Co.

⁶⁷ *Proceedings of the President and Board of Directors* G, 210. Henderson refused to leave the lock house, claiming that the structure had not been built on company-owned land. Instead, he asserted that the company had taken improperly some vacant land in 1834 and constructed the residence. Thus, a special order from the board was necessary to force him to vacate the premises. Young to President and Directors, Dec. 10, 1842, Ltrs. Recd., C & O Co.

⁶⁸ Elgin to Coale, Mar. 5, 1846, Ltrs. Recd., C&O Co.

⁶⁹ *Proceedings of the President and Board of Directors*, G, 397.

⁷⁰ Petition and Affidavit of Richard A. Moore to the President and Directors of the Chesapeake & Ohio Canal Company, Jan. 12, 1876, Ltrs. Recd., C & O Co.

⁷¹ Ingle to Rodgers, Aug. 30, 1837, Ltrs. Sent, C & O Co.

The board received word in October 1842 that the keeper of the Georgetown locks was providing adequate service at Locks Nos. 1–4 but was giving scant attention to the Tidelock. It was recommended that a lock house be built near the Rock Creek Basin Dam and that the Georgetown lock tender be relieved of that responsibility along with a cut in his \$600 annual salary. The proposal was rejected, and the directors ordered the tender to give “more efficient and prompt attention to the Tidelock.”⁷²

On several occasions, there were reports that the lock tender’s [performance] of their duties resulted in breaches and high-water problems. In April 1834 the directors were notified that several lock keepers had failed to inspect their districts for some time; thus, a breach had developed in the canal banks near Harper’s Ferry.⁷³

From the fall of 1860 to the spring of 1862 there were seven periods of high water on the Potomac, each of which caused flooding below Dam No. 4. In each case, it was reported the keeper who was responsible for putting the planks in the stop lock at that location either had failed to do so or had done so in an improper manner thus allowing the water to knock them out.⁷⁴

In March 1877 the directors received word that there was a breach between Locks Nos. 10 and 11 which had been caused by the lock tender’s poor method of repairing an earlier leak. There was also a break at the tumbling waste on the Four Mile Level, which the tender had failed to report since the previous autumn.⁷⁵

G. ABANDONMENT OF LOCKS

Some lock tenders simply left their locks unattended without notice to the company when they took other employment or when they had serious disagreements with canal officials. In June 1848 Superintendent William S. Elgin appointed John H. Boozell to be the keeper of Lock No. 25 and the Edward’s Ferry River Lock, subject to the confirmation of the board. He had taken this action, according to his report to the directors, because Asa Aud, the former tender, “had gone off.” The board quickly approved the action.⁷⁶

Later in April 1863 Samuel Smart was appointed to replace the tender at Locks Nos. 1–4 who had left his job, and in June 1874 John W. Mimmis was given the job of C. Shanks who had “quit” as the keeper of Lock No. 12.⁷⁷

When some of the tenders of double locks were unsuccessful in their bid to secure a larger salary advance than that granted to the single lock keepers, S. C. Rogers abandoned Locks Nos. 45–46 in protest in May 1864 and was replaced by Obadiah Barger.⁷⁸

H. ABSENCE FROM LOCK WITHOUT PROVIDING AN ADEQUATE SUBSTITUTE

For a long period of time, many of the lock tenders took advantage of their isolated locations by leaving their locks in charge of unqualified substitutes while they attended to personal business.

⁷² *Proceedings of the President and Board of Directors*, H, 555–56.

⁷³ *Ibid.*, D, 80–81.

⁷⁴ Embrey and Son to Dellinger, Apr. 26, 1862, Ltrs. Recd., C & O Co.

⁷⁵ Latchford to Gorman, Mar. 24, 1877, Ltrs., Recd., C & O Co.

⁷⁶ *Ibid.*, H, 178–79, and Elgin to Board of Directors, Ltrs. Recd., C & O Co.

⁷⁷ *Proceedings of the President and Board of Directors* K, 322–24, and Maus to Gorman, June 2, 1874, Ltrs. Recd., C & O Co.

⁷⁸ *Proceedings of the President and Board of Directors*, K, 384.

Five such cases were reported in August 1844 alone. In that month the directors were informed that John Herbert, the tender of Locks Nos. 45-46 who was later fired for drunkenness, had left his locks for two days in the charge of Joseph Duke, his son-in-law who lived in the lock house with him. Joseph Hollman, the keeper at Lock No. 44, had never attended his lock in person, leaving the job to his employees at his sawmill in Williamsport. On one day of that month even these men had been absent with the lock left in the hands of one of the men's wives. Isaac Dodd had left Lock No. 43 in charge of his young son for one day. That same day Henry Boyd had left his locks to be operated by his wife's sister. Levi R. Shaw also had left an inadequate substitute at guard Lock No. 4 for one day.⁷⁹

Following the recitation of the information and similar reports from other superintendents on the line, the board determined to put a stop to the growing problems arising from the lock keepers' chronic absences from their duties. On December 20, 1844, the directors issued a new order prohibiting any employee from leaving the portion of the canal under his charge for any reason without the prior consent of the division superintendent. The superintendents were to report any infractions immediately and stern disciplinary action was promised for offenders.⁸⁰

Apparently, this order was effective in solving the problem, because no reports of similar abuses were found in the company records for nearly twenty years.

In fact, only two other cases of chronic absence without approved substitutes were found in a cursory survey of the company papers. In November 1864 Obadiah Barger, a long-time canal employee, complained that he had been removed two months earlier as tender of Locks Nos. 45-46 without just cause, and that Susan Newcomer, who had been appointed to replace him, never had appeared at the locks. Instead she had hired a young person to operate the locks without notifying the division superintendent. When the directors heard that Mrs. Newcomer had delegated her authority in violation of the company regulations, she was dismissed from the payroll and Barger was reinstated to his job.⁸¹

An interesting case occurred in September 1876 when John T. Hill, who had worked for the company for ten years, was dismissed from his duty as the tender at Lock No. 16. Although he had a good employment record, Hill left the lock in the charge of his assistant every afternoon when he went to get his cow for milking. When he was discharged, Hill had nine friends sign a petition to the directors vouching for his orderly character, his membership in the Sons of Temperance, and his responsible care of the lock. The latter point was buttressed by the fact that the same lock gates had been in place for eleven years.⁸²

There was no indication in the company records as to whether the board took any action on the petition.

I. SALE OF INTOXICATING BEVERAGES BY LOCK KEEPERS.

Soon after navigation on the canal commences in the fall of 1830 the board considered a ban prohibiting the lock keepers from selling intoxicating beverages. Such a ban was first issued June 10, 1831, and the following month on July 16 it was incorporated into the formal company regulations.⁸³

⁷⁹ Stone to Coale, Aug. 29, 1844, Ltrs. Recd., C & O Co.

⁸⁰ *Proceedings of the President and Board of Directors*, G, 219.

⁸¹ *Ibid.*, K, 405-06, and Barger to Brengle, Spetes, and Watson (three letters), Nov. 4, 1864, Ltrs. Recd., C & O Co.

⁸² Prettyman to Gorman, Sept. 11, 1876, Ltrs. Recd., C & O Co.

⁸³ *Proceedings of the Stockholders*, A, 182, and *Proceedings of the President and Board of Directors*, B, 410-19.

Two exceptions were made in this ruling when the lock keepers at Crommelin and Rushville were permitted to establish taverns, but, otherwise, an attempt was made to enforce the prohibition along the line. There were numerous complaints of violations by the lock tenders, one of the most notorious being A. S. Adams at Lock No. 33.⁸⁴

The board experienced little success in its efforts to prohibit the illicit liquor trade. After numerous reports of disorderly conduct near Great Falls and Rushville that were the result of drinking at the lock houses at those two locations the board in November 1844 revoked the privileges that it had granted the lock tenders effective May 1, 1845.⁸⁵

Soon, however appeals by the boatmen and local people pressured the directors into reversing their stand and allow the sale of liquor at those locations.

The existence of grog shops in many of the lock houses continued to be a nuisance to the efficient operation of the canal. In May 1848 J. F. Lewis complained to the board that one of his boats had been damaged and its cargo of flour partially destroyed at Lock No. 26 because of the carelessness of James Fitch, the lock tender, and his assistant. When the matter was investigated, it was found that the captain of the boat had been drinking when he arrived at the lock, and upon being informed that Fitch was repairing a break on the level below the lock, he had gone into the lock house to purchase more liquor. At midnight the boat, which had been left untied near the canal banks, was found sinking to the bottom of the waterway and the flour floating on the surface of the water. The boat captain, who was drunk by this time, solicited the aid of the assistant lock keeper to recover some of the flour. With the aid of several other boatmen the assistant recovered what flour he could. For his services, the assistant agreed to accept three barrels of flour, and the lock tender took one barrel of fine flour in payment for the captain's beverage bill.⁸⁶

The board received the full report on this incident on June 5. At the same time, it was represented to the directors that many of the boatmen and company hands were getting drunk while on the job because of the numerous grog shops in the lock houses. Accordingly, the board determined to prohibit "the sale, barter or disposal of intoxicating liquors at any of the lock houses" with the exception of "the tavern stands at Rushville & Crommelin." The order was to be enforced by the division superintendents.⁸⁷

The following year the board took steps to eliminate the sale of liquor at the Crommelin and Rushville taverns. In September the directors voted to discontinue the rental of these two structures as taverns and to use them only as lock houses for tenders at Locks Nos. 19–20 and Lock No. 23 and Guard Lock No. 2 respectively. Since the living accommodations at both places were superior to other lock houses, it was determined to pay each tender \$100 per year. Henceforth the sale of liquor was to be prohibited at both locations after July 1, 1850.⁸⁸

Both of the lock keepers at Crommelin and Rushville appealed the decision to cut their wages to \$100, claiming that the closing of their taverns had hurt them financially.⁸⁹

In response, the board raised their annual salaries to the level of \$200 that was the standard for all tenders of two locks.⁹⁰

The board continued adamant in its stand against the sale of liquor along the line of the canal. In 1858 Henry Busey, the tender at Locks Nos. 19–20, was permitted to reestablish a hotel

⁸⁴ *Proceedings of the President and Board of Directors*, E, 69.

⁸⁵ *Ibid.*, G, 210–11.

⁸⁶ Elgin to Coale, May 6, 1848, Ltrs. Recd., C&O Co.

⁸⁷ *Proceedings of the President and Board of Directors*, H, 319.

⁸⁸ *Ibid.*, H, 296–97.

⁸⁹ *Ibid.*, H, 322–443.

⁹⁰ Coale to Collins, May 31, 1850, and Ringgold to Lambre, July 1, 1851, Ltrs. Sent, C & O Co.

or "ordinary" at Crommelin House for the accommodation of visitors to the "Great Falls" provided that no alcoholic beverages were served. George W. Case, the keeper of the locks at Great Falls from 1858 to 1872, was allowed the privilege of continuing to operate the hotel under the same conditions.⁹¹

J. REPUTABLE LOCK KEEPERS

While many of the lock tenders were undisciplined and indifferent to their jobs, there were some whose abilities and devotion to their duties was recognized and rewarded. The case of James O'Reilly, the keeper of Locks Nos. 1-4 and Tidelock A from 1831 to 1842 has been mentioned already. His reputation for honesty and integrity was so well documented that he was appointed by the board to serve as collector in Georgetown in 1834. In return, the directors rented two of the company buildings in that town to him, one of which was to serve as his office.⁹²

Another man with similar credentials was William S. Elgin who served as the tender of Lock No. 33 and the Shenandoah River Lock and as Collector at Harper's Ferry throughout the 1840s and early 1850s.⁹³

Some lock tenders were promoted to positions as division superintendents in recognition of their responsible contribution to the operation of the canal. Along these individuals were the aforementioned Elgin and John Y. Young, who served the company throughout the 1830s and 1840s as a lock tender and superintendent of the Georgetown Division. One of the most respected superintendents of that division in the 1840s was John Lambie, who began his employment with the company as the tender at Locks Nos. 9-10 on May 1, 1847. Three superintendents whose service to the company extended into the 1870s received their initial canal experience as lock keepers: A. K. Stake at Locks Nos. 41-42 from April 1, 1847, to July 1, 1848; Lewis G. Stanhope at the same locks from July 1, 1848, into the early 1850s; and Overton G. Lowe, the first individual to be assigned to Lock No. 56 when the waterway was opened to Cumberland in October 1850.⁹⁴

There were other events throughout the canal operating history that indicated a large degree of reliability on the part of most of the lock tenders. During the spring and summer of 1841 when the company finances were desperately low, the keepers and other officers either were not paid for months or received their pay in depreciated scrip, which had a reduced value of nearly 50 percent.⁹⁵

Despite the fact that they were not paid for months, there is no indication that many of the tenders left the line during this period. A similar set of events occurred in the fall of 1859 when the tenders and canal laborers went unpaid for some months. In December of that year, those individuals were reported to be "in a very destitute state for want of the pay due to them, and were unable to procure necessary supplies for their families." Again there were no reports that any of the lock tenders left their locks. To forestall such an occurrence, the board, determined to pay the tenders and laborers with "certificates of indebtedness."⁹⁶

The lock tenders demonstrated their loyalty to the canal company under similar circumstances during the waning years of the independent existence of the waterway. Following the

⁹¹ Hening et al to President and Directors, Mar. 1, 1858, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, K, 28-29, 352.

⁹² O'Reilly to Ingle, Apr. 23, 1834, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, D, 228, F, 412.

⁹³ *Report to the Stockholders on the Completion of the Canal to Cumberland*, 139-140.

⁹⁴ *Ibid.*

⁹⁵ *Proceedings of the Stockholders*, B, 486.

⁹⁶ *Proceedings of the President and Board of Directors*, K, 147-48.

heavy flood in November 1877, all the company officers, toll collectors, and lock keepers, who were not involved in the repair work, were removed from the company payroll so "that expenditures were restricted to the actual cost of repairs and office expenses." A significant number of locks men joined the repair crews as common laborers, thus expediting the restoration of the waterway.⁹⁷

As the canal trade continued to decline during the 1880s, the canal company took various steps to cut its operating expenses. During the winter of 1883–84 the pay of the lock tenders was reduced by 50 percent.⁹⁸

In June 1885 it was reported that most of the tenders were waiting patiently for their overdue wages. Only a few keepers in Washington County had presented problems to the directors because their wages had not been paid for some months.⁹⁹

In 1889 just prior to the major flood in late May the company reported again that the tenders as a whole were faithfully carrying out their duties although they had not been paid for sometime.¹⁰⁰

K. THE LOCK HOUSES: 1828-1850

Two general specifications were drawn up by company engineers for the construction of the lock houses. According to the 1828 specifications for the lock houses, the structures were to be of stone, having dimensions of 30 feet by 18 feet. There was to be an earthen-floored cellar beneath the kitchen six feet in the clear with 22-inch thick walls. The principal story of the house was to be two feet above ground surface with 20-inch thick walls. That part not over the cellar was to have a stone footing all around of six more inches. The space between the ground and the bottom floor was to have three 9-inch by 4-inch slits to be covered over with perforated iron or copper plates. The ceiling was to be eight feet above the floor. The attic story was to have 18-inch thick walls, which were to rise three feet between the top of the floor and the square. The peak of the roof was to be six feet above the side walls. The stone work was to be laid in clay mortar with the exception of three inches on the outside of the walls above the ground surface and the inside of the cellar which was to be laid in lime mortar.

The chimney was to be built in the center of the house and to have a stone foundation while the stalk could be built of stone or bricks. There was to be a fireplace in each of the lower rooms. The outside doors were to have stone sills and steps, while the window sills could be either of stone or of painted and sanded locust timber. All the door and window lintels were to be of stone.

The floors of the lock houses were to be of 1 1/4 inch heart pine that did not exceed six inches in width. The front door was to have a stock lock, the kitchen door an inside bolt, the parlor door a seven-inch nob lock, and the rest thumb latches. The windows in the principal story were to be 10-inch by 12-inch glass panes, while those in the upper story were to be 8-inch by 10-inch glass. A 10-inch by 12-inch glass sash was to be put over the front door to light the entry. The roof was to consist of 18-inch cypress shingles, not less than four inches wide and 5/8 inch thick.

The principal story was to be divided into two rooms divided by a stud partition. The two rooms in the attic story were to be separated by a 1 ½ inch plank partition. The ceilings and stud

⁹⁷ *Fiftieth Annual Report* (1878), C & O Co., 9-10.

⁹⁸ *Fifty-Sixth Annual Report* (1884), C & O Co., 19.

⁹⁹ *Fifty-Seventh Annual Report* (1879), C & O Co., 9.

¹⁰⁰ *Sixty-First Annual Report* (1889), C & O Co., 10-11.

partitions were to be lathed and, together with the walls, finished with three coats of lime mortar made with glue and clear sand.¹⁰¹

In February 1836 a revised specification for the lock houses was adopted which incorporated a few changes. The houses were still to be 30 feet by 18 feet, but they could be of stone or brick at the option of the contractor. If the walls were of brick they were to be 13 ½ inches thick; if they were of stone they were to be 20 inches thick. The houses were to have full basements that were provided with drains protected by iron gratings. The lintels and sills of the doors and windows were to be of locust. All the outside and inside woodwork was to be given two or three coats of English white lead oil paint. The outside doors were to have Pennsylvania or German locks with iron handles. All of the masonry, except for the top 1 ½ feet, was to be laid in lime mortar. The top portion was to be laid in water cement. Virtually all of the other details were similar to the 1828 specifications.¹⁰²

When the canal was finally completed between Dam No. 6 and Cumberland in 1847–50, the company attempted to save money and to speed construction by delaying the erection of lock houses on that portion of the line. When the final segment of the canal was opened to navigation, the lock houses above the Cacapon River were built. Apparently no single specification was used as some of the structures were of frame or log construction and had various designs and dimensions.

¹⁰¹ *Specification of a Lock Keepers House, ca. October 1828, Drawings and other Records Concerning Construction.* The estimated cost for such a structure was \$828.46. A copy of this specification may be seen in Appendix A.

¹⁰² *Specification for a Lock Keeper's House, February 10, 1836, Drawings and Other Records Concerning Construction,* C & O Co. The estimated cost for such a structure was \$950. A copy of this specification may be seen in Appendix B.

II. THE BOATMEN

A. INTRODUCTION

The life of the boatmen on the canal was one of hard work, long hours, and little pay. The daring adventure of their employment coupled with their isolation from much of the world outside of the canal made the independent-minded boatmen a rough and ready lot. They usually formed a class apart from their neighbors in the Potomac Valley, intermarrying within their own group. Their children were frequently born and raised in the trade and generally had little exposure to the educational or social refinements of the emerging American culture of the 19th century. The boatmen were constantly brawling among themselves for precedence at locks or because of some real or fancied slur. Their life was at best irregular and unpredictable, and the "canallers" exhibited those characteristics in their lifestyles. Some dawdled along the line or amused themselves in drunken revelry, taking their time in making the run. Others were more ambitious, driving their teams and boats at full speed night and day, caring little for themselves, their mules or boats, or canal property. The boatmen were constantly at odds with the company over toll rates and freight charges and with the lock keepers over operating procedures or personal slights. Usually, the "canallers" shunned the larger towns along the canal, for it cost too much to feed their teams, and they felt out of place. Even while wintering along the line they had their own settlements on the fringes of the towns or often quite far from them.¹⁰³

B. CHARACTERISTICS OF THE BOATMEN: 1830-1850

Although many of the "canallers" were hard working and conscientious, the canal company records are filled with references to the brawling, unpredictable, and quarrelsome behavior of the boatmen. In their relationships with each other and with company officials, they exhibited a fierce independence and contentiousness that often ignored or opposed any show of authority by the company officials.

The rigors of life in the largely agrarian and forested Potomac Valley had its effect on the brash behavior of the early boatmen. It appears that they were constantly brawling among themselves for precedence at locks, because of some real or fancied slur, or for exercise. On April 2, 1831, Daniel Van Slyke, the superintendent of the canal, reported that since the water had been admitted into the canal two weeks earlier:

it is with great difficulty we have been able to preserve order among the boatmen, who in striving to push forward for a preference in passing the several locks are sometimes disposed to injure each other's boats as a means of carrying their point. An unfortunate instance of this kind happened on Wednesday last at the locks on the 9th section. A strongly constructed boat ran her bow against a gondola loaded with flour, and so much injured her as to render it necessary to tranship the load. But no damage was done to the cargo.

¹⁰³ Sanderlin, *The Great National Project*, 186-88, and *Baltimore Evening Sun*, Aug. 9-13, 1937. In his book, Sanderlin sketches some of the characteristics of the boatmen from information that he obtained in interviews with George Nicholson, General Manager of the canal from 1890 to 1838, "Charley" Egan and Harvey Mayhew, former boatmen, Frank Lee Carl, a newspaper correspondent and local historian in Cumberland, and Edward Oswald, Clerk of the Washington County Circuit Court at Hagerstown. In the series of five *Baltimore Evening Sun* articles, Lee McCardell discussed the life of the boatmen basing most of his material on two extensive interviews with Captains Charlie (Scot) Eaton of Cumberland and Denton (Dent) Shupp of Williamsport.

Van Slyke went on to suggest that some regulations be adopted by the board to help the lock tenders preserve order.

so that the boats may pass the locks by turn as they arrive, as it frequently occurs that fifteen or twenty boats arrive at a lock within half an hour. Hence the contention for right of preference, which I believe would be allayed if it was known that they must be permitted to pass only by turn as they arrive.¹⁰⁴

During the following month, Van Slyke informed the directors that the boatmen particularly represented the priority given to the packet *Charles F. Mercer* in passing the locks. As this policy already had triggered angry protests, he advised the board to print the order on handbills to be left with the lock tenders and distributed among the boatmen. Unless this were done, it would be virtually impossible to enforce the policy.¹⁰⁵

The boatmen were constantly at odds with the company over toll rates and in the early days took unusual ways of expressing their dissatisfaction. W. W. Fenelon, the owner of the first packet service between Georgetown and Great Falls, staged a drunken demonstration in Georgetown in September 1831, which was reported to company officials by a local resident:

Being at the break, at Baker's, at about 6 o'clock, we heard a thundering noise of wild music and saw a large cavalcade (of) colors flying & having got near, it proved to be Mr. Fenelon, with his teams and crew with the colors of the Packet floating in high glee; he proceeded and paraded down Bridge Street, made a stop upon the new bridge, and refreshing himself and his crew after much music gave the word of command for High Street reeling in saddle all the way; a gang of Negroes and boys thronging the street until nearly dark. Now, sir, their ostensible object of all that fuss, is a loud complaint about the tolls, which gives him a pretext to pour abuses on the institution and bias the mind of the people at large.¹⁰⁶

The directors were irritated particularly by the quality of the boats operating on the canal. No one was willing to undertake to fulfill their dreams of steamers and double-decked packets. In fact, the boatmen generally refused to meet even the minimum requirements of the company regulations. Complaints were frequently made of iron-shod boats, leaky scows, drifting rafts, and sunken gondolas obstructing navigation.¹⁰⁷

Not only were the boats affecting the flow of traffic on the waterway, but they also were causing damage to the locks. This growing problem was reported to the board in December 1838 as follows:

many of the canal boats navigating the canal are armed on their sides with iron, and do great damage to the locks as they pass through. Many of the stone scows (their ends being at right angles) have their corners plated with iron, and entering the locks they frequently strike the coping and other parts of the lock and do great damage. By examining the locks in Georgetown you will readily perceive what damage has already been done.¹⁰⁸

¹⁰⁴ Van Slyke to Mercer, Apr. 2, 1831, Ltrs. Recd., C & O Co.

¹⁰⁵ Van Slyke to Directors, May 26, 1831, Ltrs. Recd., C & O Co.

¹⁰⁶ Rodier to Ingle, Sept. 8, 1831, Ltrs. Recd, C & O Co.

¹⁰⁷ *Proceedings of the President and Board of Directors*, C, 30, and Stone to Ringgold, June 6, 1847, Ltrs. Recd, C & O Co.

¹⁰⁸ Easby to Directors, Dec. 19, 1838, Ltrs. Recd., C & O Co.

By the enforcement of regulations, the provision of dry docks, the assessment of fines, and the levy of a 100 percent rate discrimination against rafts, the company sought to drive undesirable craft off the waterway and to encourage the construction of new and larger boats. In this effort they were partly successful, assisted by the need for larger and sturdier boats to handle the growing demands of the trade. Nevertheless the lumber trade and the incidental trade of the numerous valley farmers, who after building their own craft designed to last for only one trip (usually to be sold at Georgetown for firewood), made the struggle for better boats a never ending one.¹⁰⁹

The formulation of detailed regulations for the operation of the canal adopted in July 1831 and February 1835 did not insure the orderly conduct of business on the waterway. On the contrary, every conceivable abuse was reported at one time or another. The board immediately saw the necessity of securing some definite delegation of police power from the parties to the charter in order to gain the authority to enforce its regulations.¹¹⁰

Repeated directions for the enforcement of the rules indicate a laxness or indifference on the part of the officials and boatmen alike. Regulations which were regularly singled out for stricter enforcement were those that prohibited the use of iron-shod poles for propulsion, the navigation of the canal by boats that did not conform to the company specifications, the negligent practices that caused damage to locks, and the schemes of boatmen to defraud the company of toll payments.¹¹¹

C. CHARACTERISTICS OF THE BOATMEN: 1851–1889

Many of the characteristics of the early boatmen also were exhibited by those who plied the waterway after its completion to Cumberland in 1850. The same problems of violent behavior, disregard of company regulations and property, and reckless navigation practices by the boatmen continued to plague the waterway.

On April 1, 1851, a new system of by-laws, rules, and regulations for the government, management, and operation of the waterway went into effect. Printed as a 47-page booklet, the regulations covered every facet of the canal's operation in detail and clearly defined the monetary penalty for every offense of the boatmen. This set of regulations, which remained in effect until 1889, was the most comprehensive effort of its kind to be undertaken by the board. The booklets were printed in great quantities and distributed to every boatmen and canal official.¹¹²

In the months immediately following their adoption, the new regulations appeared to have the desired effect upon the "canallers." That this was the case was evidenced by the following report made to the company stockholders by President William Grason on June 2, 1851:

We have every reason to believe, as far as we can judge, from the short period which has elapsed since the by-laws of the company went into operation on the first of April last, that very beneficial results have, and will attend them; in the company...and producing a

¹⁰⁹ Sanderlin, *The Great National Project*, 188.

¹¹⁰ *Proceedings of the Stockholders*, A, 173, and *Proceedings of the President and Board of Directors*, B, 206. This subject is covered more fully in Chapter 12 of this study.

¹¹¹ Bryan to Ingle, Aug. 15, 1831, Ltrs. Recd., C & O Co. and *Proceedings of the President and Board of Directors* B, 290, C, 30. To aid the tenders in the enforcement of the regulation against the use of iron-shod poles, the directors authorized in August 1831 the construction of a shed at Lock No. 23 where wooden poles could be stored. The boatmen would be given such poles free of charge if they turned in their iron poles. Bryan Ingle, Aug. 15, 1831, Ltrs. Recd., C&O Co.

¹¹² *By-Laws, Rules, and Regulations: In force on the Chesapeake & Ohio Canal*, 1-47

degree of order and regularity on the part of those navigating the canal, which has heretofore not existed. Although, as was to be supposed, in any new system of regulations, some opposition would, in the outset, be manifested by those to whom any restraint would be irksome, we have reason to believe, that all well-disposed persons engaged in navigating the canal, regard these regulations as wholesome and necessary, acting both as a protection to the works, of the company, insuring more regularity, and less frequent interruptions to the navigation of the canal, and, at the same time, preventing collisions with some of the boatmen, who have hitherto been disorderly. Under all circumstances, there has been less objection than could have been expected, and the boatmen have very generally quietly acquiesced in, and readily complied with the provision of the regulations.

Few infractions of the new regulations had been reported by the officers on the line of the canal. The amount of fines that had been imposed was \$140, of which \$80 had been written by the directors for sufficient reasons.¹¹³

Needless to say, the peaceful acquiescence to the company regulations by the boatmen did not last for long. The abrasive behavior of many of the boatmen soon became a great concern to the directors as they sought to maintain the orderly operation of the waterway. Among the most conspicuous examples of the revival of their destructive spirit were the (1) disregard of company rules and officials, (2) clamoring for access to the coal wharves on the congested Georgetown level, (3) reckless navigation practices which led to boating accidents and to the destruction of works on the canal, (4) incidents of physical violence vis-à-vis the lock tenders, (5) reluctance to meet the minimum requirements of the company regulations relative to the quality of the barges, and (6) attempts to defraud the company of its rightful tolls.

1. Disregard of Company Rules and Officials

By the fall of 1851 there were widespread reports of boatmen who were ignoring both the company regulations and the attempts of canal officials to enforce the rules. One common case was the insistence of boat captains to use grab hooks while passing through the locks. This persistent practice, which tended to cause injury to the masonry of the locks, was considered to be of such a serious nature that the board at one time considered revoking the license of any captain who refused to comply with the regulations.¹¹⁴

Another practice, which indicated the boatmen's lack of respect for the company regulations and the canal officials who attempted to enforce the rules, was that of refusing to pay fines. At first this was a minor problem as evidenced by the fact that all but \$10 of the total amount of \$140 levied in fines during the first three months of operation under the new rules in 1851 was paid. However, by the late 1870s nearly 70 percent of the fines were never paid. One of the worst years in this respect was 1877 in which only \$45.47 was collected by canal authorities out of the total of \$126.52 assessed.¹¹⁵

One of the most notorious incidents in this regard occurred in May 1874 when George Reed, captain of the *Mayfield and Heiston*, was fined \$20 for illegally mooring his boat in the Cumberland basin. Refusing to pay the fine, he prepared to leave Cumberland with a barge cargo of coal destined for Georgetown. Because he refused to pay the fine, the collector at Cumberland would not give him a waybill. When the lock tenders at Lock No. 74 attempted to prevent him

¹¹³ *Proceedings of the Stockholders*, D, 409.

¹¹⁴ *Proceedings of the President and Board of Directors*, H, 476.

¹¹⁵ *Fines Paid and Unpaid for 1877*, Ltrs. Recd., C & O Co.

from continuing his journey until the fine was paid and a waybill was served, Reed forced his way through the lock. This event brought an additional fine of \$50 and a warning from President Gorman that a repetition of such an act would result in another \$50 penalty. Nevertheless, the boat was allowed to proceed to Georgetown without further hindrance. After Reed deposited his cargo in Georgetown, he was confronted by canal officials and served notice that he owed the company \$120 in fines and \$4.08 for a waybill. Again, he defiantly ignored the remonstrance of the agents, commenced his return to Cumberland without a waybill, and forced his way through the locks despite the protests of the collectors at Georgetown, Lock No. 5, and Harpers Ferry. When Reed arrived in Cumberland, his boat was seized with the aid of the police and confiscated until he paid the sum of \$124.08.¹¹⁶

2. Clamoring for Access to the Coal Wharves on the Congested Georgetown Level

As trade on the waterway increased, the method of expediting canal traffic on the Georgetown level soon became a major obstacle to the continued growth of business. Unloading and transfer facilities were unable to handle the increasing tonnage, which was brought to them. As a result, boats lined up in the canal awaiting their turn to unload. Not only were the delays annoying and costly to the boatmen, shippers and company alike, but the congestion on the Georgetown level was a problem in itself. The waterway was not wide enough to accommodate both the ordinary traffic to and from the basin or the aqueduct and the clamoring boatmen awaiting access to the coal wharves.

Complaints about the congestion and confusion on the Georgetown level forced the directors to take steps to alleviate the problem. In October 1864 the superintendent of the Georgetown Division was authorized to employ a harbormaster to regulate the boats at that place.¹¹⁷

Further reports by Georgetown citizens of brawling among the annoyed boatmen as they struggled to achieve quick access to the coal wharves led to the board's decision in April 1866 to invest the harbor master "with police authority to enable him more effectually to discharge the duties of his office."¹¹⁸

By 1871 the problem had become serious. Frequently there was a line of 60 to 80 boats along the canal bank and occasionally the string of loaded boats stretched from one half to one mile in length. As the boatmen jostled for position, some barges ran aground causing delays to the other boats.¹¹⁹

In their frustration, many "canallers" disregarded the company regulations and began lining up two, three, and four abreast in an effort to get closer to the wharves.¹²⁰

Some of the more contentious boatmen attempted to get to the wharves out of turn, and when they were refused service they would moor their barges next to the unloading vessels, thereby causing jams and confusion. Two of the most flagrant examples of such practices were cases where a Maryland Coal Company boat obstructed traffic on the canal for six hours while "lying double" and another barge owned by the same company that blocked the navigation for twelve hours after trying to get ahead of eighteen boats in line at the Welch Wharf.¹²¹

¹¹⁶ Pope to Gorman, May 6, 1874, Weber to Gorman, May 20, 1874, and Wenner to Gorman, June 8, 1874, Ltrs, Recd., C & O Co.

¹¹⁷ *Proceedings of the President and Board of Directors*, K, 402.

¹¹⁸ *Ibid*, K, 482.

¹¹⁹ *Forty-Second Annual Report* (1870), C & O Co., 25.

¹²⁰ Hayden to Clark, June 14, 1871, Ltrs. Recd., C & O Co.

¹²¹ *Report on Fines Imposed on Boats* by R. G. Connell, Harbormaster, Mar. 22, 1871," Ltrs. Recd., C&O Co.

The board soon initiated a series of steps to relieve the congestion and to restore order, regularity, and authority in the control and movements of boats on the Georgetown level. As the harbormaster was ill equipped to control the growing problem by himself, the directors authorized the employment of an assistant.¹²²

New regulations were enacted which were strictly enforced, and a contract was let to build the Georgetown Incline Plane.¹²³

3. Reckless Navigation Practices

There were numerous instances where the reckless navigation practices of the boatmen led to accidents that caused damage both to the barges and canal structures. At times boat races were held up and down the canal—the fastest-known time for a light boat from Georgetown to Cumberland was 62 hours set by Raleigh Bender of Sharpsburg while the best-known time for a loaded boat from Cumberland to Williamsport was 35 hours set by Dent Shupp of the latter town with 128 tons of coal. To set such records the boatmen walked along the towpath feeding the mules handfuls of hay while boating and giving them feed and water while passing through a lock.¹²⁴

In their haste to gain time in navigation, the captain, often ignored the company regulations for passing. Hence a number of boat collisions occurred, one of the most notable involving a freight boat and a packet in July 1855. As a result of the accident, the passenger vessel was sunk and the freight boat's captain received a stiff fine.¹²⁵

The reckless maneuvering of the boatmen and their lack of concern for canal property was manifested in other ways. Over the years Aqueduct No. 3 was the site of numerous accidents as a result of careless boatmen who refused to slacken their speed to negotiate the sharp bend immediately upstream. After a number of accidents in which boats struck and damaged the side-walls of the aqueduct, the board in March 1870 issued an order that all barges were to slack their speed at least fifty yards from the approaches of the structure. The order was printed on handbills for distribution, and a watchman was stationed at the aqueduct to see that the boatmen complied with the directive.¹²⁶

One of the most frequent results of the careless practices of the boatmen was the damage done to the lock gates. When the "canallers" were in a hurry, they often failed to slacken their speed sufficiently as they approached a lock. At other times, the impatient boatmen attempted to "lock through" without waiting for the service of the lock tenders. Such practices led to the numerous incidents in which the boats would strike and break the gates, thereby interrupting navigation for as much as a day until a new gate was put in.¹²⁷

During one 4-year period from 1877 to 1880 there were nine occasions where boatmen were fined for running into or breaking lock gates.¹²⁸

The negligent navigation practices of the boatmen sometimes caused greater damage to their vessels than to the canal structures. In one case, the *Loretto* struck the upper abutment of the

¹²² Hutton to Clarke, Mar. 31, 1871, Ltrs. Recd., C & O Co.

¹²³ Both of these subjects are covered more fully in Chapter 12 of this study.

¹²⁴ *Baltimore Evening Sun*, Aug. 9–13, 1837.

¹²⁵ *Proceedings of the President and Board of Directors*, I, 193.

¹²⁶ Hutton to Thomas, March 19, 1870, Ltrs. Recd., C & O Co.

¹²⁷ Grimm to Chesapeake & Ohio Canal Company, Apr. 22, 1871, McMachaw to President and Directors, Mar. 11, 1874, Fletchall to President and Directors, June 17, 1875, and Fletchall to Gorman, July 18, 1876, Ltrs. Recd., C & O Co.

¹²⁸ Register of Offenses, 1877–1881, C & O Co.

Lock No. 15 and broke a hole in its side about one foot square. The boat sank, causing a 24-hour suspension of the navigation.¹²⁹

Many of the boating accidents were attributable to the intoxication of the "canallers." One bizarre incident occurred in June 1873 when the American Coal Company boat *Henry C. Flagg* struck the gates of Lock No. 74 with such force that all four were knocked out and the vessel sank in the lock chamber, thus disrupting navigation for 48 hours. An investigation of the incident revealed that the boat had left Cumberland on the charge of two black hands, as its captain, Mr. Mulligan, was on a drunken spree in Shantytown. When the boat arrived at Lock No. 75, the lock keeper demanded a waybill, which the crew did not possess. When the hands agreed to wait until the captain arrived with the document, the tender noticed that the boat was filling with water because of several leaks. Since the hands did not have a pump, the keeper fearing the boat would sink ordered them to pull on to the short level below the lock. Soon the intoxicated captain arrived with the waybill and, disregarded the tender's entreaty to pump out the boat, ordered his hands to get the barge moving. They dutifully pulled the boat alongside the *F. C. Young*, which was about to enter Lock No. 74, thereby creating a jam in the mouth of the lock. While Captain Mulligan went to a nearby store, his crew borrowed a pump and commenced to extract the water from the boat. After the crew of the *F. C. Young* maneuvered their boat back to loosen the jam, the crew of the *Henry C. Flagg* pulled their boat into the lock. No effort was made to snub the boat; thus it struck the lower lock gates and knocked them out, the upper gates slammed shut and broke, letting water from the upper level run over the boat and causing it to sink.¹³⁰

Many mules were also lost as a result of the negligent practices of the boatmen. One such example occurred near the brickyard on the Logwall Level in May 1873. As two boatmen were passing each other, the driver of one of the mule teams urged his animals on with a series of violent gestures. The driver theatrics frightened the team of the other boat, causing the two mules to jump over a high embankment. One of the mules was killed and the other was injured.¹³¹

4. Incidents of Physical Violence

As the lock tenders and the boatmen came into frequent contact, there were numerous instances of fighting between the two groups. Because both the lock men and the "canallers" were independent, rough and ready individuals, the initiative for the incidents of physical violence generally appears to have been taken by the latter. At the same time, it is clear that the lock tenders were often quick tempered and eager to respond to any provocative challenge flung at them.

One of the most celebrated incidents occurred at Lock No. 75 in July 1874. The quarrel commenced when the *Okonoka* was "locking through" early one morning. The towline of the boat caught on the lock railing and tore it loose. Furthermore Captain John Byroad insisted on scrubbing the sides of his boat with a broom while still in the lock. As another boat was waiting, John M. Bloss, the tender, ordered him to pull the barge out of the lock. Byroad refused whereupon one of Bloss' sons opened the berm gate. The gate's beam pinned one of Byroad's sons against the side of the boat where he was scrubbing. An argument and fisticuffs resulted in which one of Bloss' sons was knocked off the boat by the captain's wife. After a flurry of rock throwing between the boys of the boatmen and the lock tender, one of the latter's sons injured a son of the former with a club. When the tender's boys were chased to the lock house, they returned with a revolver and double-barreled shotgun both of which misfired when they tried to use them. As the

¹²⁹ Maus to Gorman, Nov. 30, 1872, Ltrs. Recd., C & O Co.

¹³⁰ Malvany to Gorman, June 25, 1873, Ltrs. Recd., C & O Co.

¹³¹ Garrett to President and Board of Directors, July 2, 1873, Ltrs. Recd., C & O Co.

boat continued on its journey, the tender followed it all the way to Cumberland on horseback, brandishing a club and threatening that he would ‘settle up the damage Old Bitch.’¹³²

At times the mere threat of violence by the boatmen so intimidated the lock tenders that they were unable to fulfill their duties. An example of this situation took place when the lock keepers were ordered to enforce the prohibition against Sunday navigation in the late 1860s and early 1870s. When the tenders attempted to prevent some boats from passing through the locks on the Sabbath, the boatmen threatened to fight any individuals who got in their way and proceeded up the canal busting the padlocks on the lock gates as they went. When some of the lock tenders attempted to stop the boatmen, violence erupted and reports of rioting and “depredations” spread along the line. The boatmen quickly gained the upper hand in the struggle, and the company soon gave up its attempts to enforce a “Sunday Law.”¹³³

5. Quality of the Boats

Many of the boatmen continued to be reluctant to meet even the minimum requirements of the regulations regarding the quality of the boats operating on the canal. There were numerous complaints of leaky scows, iron-shod boats, and sunken wrecks obstructing navigation. From 1855 to 1858 some 34 barges were broken or sunk as a result of either poor construction or inattention to periodic maintenance work.¹³⁴

While the quality of the canal boats tended to improve with the growth of trade in the post-Civil War era, there were still reports of boats sinking because of their “bad condition.”¹³⁵

One of the more bizarre stories in this regard was that of a boat which started sinking at Cumberland when it was loaded. The crew pumped the water out and began the trip to Georgetown, all the while pumping to keep the vessel afloat. The barge finally sank just above Lock No. 5, impeding the flow of traffic for eleven hours.¹³⁶

Some of the captains insisted on putting “sand streaks” along the sides of their boats in violation of the company rules, thereby causing them to get stuck in the lock chambers for more than an hour.¹³⁷

The problems caused by boats unfit for navigation became a critical issue by 1872 since the board was anxious to maintain an efficiently operating waterway to accommodate the expanding trade. Accordingly, a committee was appointed in that year to re-register all the vessels on the canal. At the time of registration, the vessels were to be examined to see that their dimensions and state of repair conformed to company regulations. Those boats that were deemed unseaworthy were to have their applications for registration certificates rejected.¹³⁸

Despite these efforts the canal faced increasing problems with leaky and sunken boats during the remaining years of its independent existence. Among the many incidents of this kind was the sinking of the *Lezer Ragen* at Lock No. 15 in July 1876. Leaking badly before it left Cumberland, the vessel was kept afloat by its crew until it ran into the abutments of several locks

¹³² Byroad to Gorman, July 18, 1874, Bloss to Gorman, July 18, 1874, and Mulvany to Gorman, July 24, 1879, Ltrs. Recd., C & O Co.

¹³³ *Proceedings of the President and Board of Directors*, K, 518, L, 317, 169, 422, 435–36, and “Report on Sunday Law,” May 19, 1870, Ltrs. Recd., C & O Co.

¹³⁴ *Proceedings of the President and Board of Directors*, K, 67.

¹³⁵ Hutton to Clarke, June 24, 1870, Ltrs. Recd., C & O Co.

¹³⁶ Maus to Gorman, Oct. 23, 1872, Ltrs. Recd., C & O Co.

¹³⁷ Gaimm to Chesapeake & Ohio Canal Company and Clarke to Mulvany, Apr. 20, 1871, Ltrs. Recd., C & O Co.

¹³⁸ Mulvany to Gorman, June 28, 1872, and Resloy to Gorman, Mar. 7, 1873, Ltrs. Recd., C & O Co., and *Williamsport Pilot*, Feb. 8, 1873, in Arthur P. Gorman Collection, University of North Carolina Library, Chapel Hill.

below Great Falls. As it proceeded out of the chamber of Lock No. 15, the boat sank and its bow settled down on some rocks, at the mouth of the lock, cutting a large hole in its bottom.¹³⁹

Similar stories abound of unseaworthy vessels throughout the period including that of the *Bertha M. Young*. As the boat was leaking badly, its crew convinced the steamer *Scriveners* that was passing by, to tow it while they pumped the water out. When it became apparent that the pumping efforts were futile, the boat was allowed to sink one night on level no. 36 and abandoned, resulting in a delay of 36 hours to canal navigation.¹⁴⁰

During the four-year period from 1877 to 1880 the company issued twenty citations for sunken boats or vessels that required the aid of canal hands to pump water in an effort to prevent their sinking.¹⁴¹

6. Attempts to Defraud the Canal Company of Tolls

At times the rebellious boatmen attempted to earn higher profits by attempting to defraud the company of its tolls. This was done most often when the boats were carrying a small cargo which could be hidden under the hatches and which did not weigh the boat down to a great extent. In May 1873 the *B. L. Slack* left Georgetown with 225 sacks of salt hidden under its hatches, although its waybill listed it as an empty boat. It was not until the barge reached Harpers Ferry that a company agent discovered the scheme on a tip from the mule driver that the captain was attempting to avoid the payment of \$22.50 in tolls.¹⁴²

There were numerous other instances in which captains made an effort to conceal a portion of their cargoes from the eyes of the company collectors.¹⁴³

D. CHARACTERISTICS OF THE BOATMEN: 1891–1924

In 1902 the receivers took steps toward the establishment of complete control over freight charges on the waterway. The Canal Towage Company, sponsored by the canal receivers and the Consolidation Coal Company both of which were dominated by the Baltimore & Ohio Railroad, was organized along the lines first suggested by Arthur P. Gorman in the mid-1870s. The primary function of this enterprise was to provide economy and regularity in the runs of the waterway. To do this, the company supplied the boats, teams and equipment, and established a regular schedule for the boatmen to follow. Under this new arrangement, all that the captain was expected to furnish was the deck gear, the long and short fallboards, the feed, and troughs. The Canal Towage Company also cut freight rates from 65 cents per ton to 45 cents per ton and controlled the distribution of cargoes. As a result, the service and the efficiency of canal navigation were improved, but in so doing the last shred of independence for the "canallers" was destroyed. The canal lost much of its romance as the boats began to be numbered instead of named and to be uniform and utilitarian rather than colorfully individualistic.¹⁴⁴

¹³⁹ Fleteball to Gorman, July 18, 1876, Ltrs. Recd., C & O Co.

¹⁴⁰ Moore to Gorman, Aug. 31, 1878, Ltrs. Recd., C & O Co.

¹⁴¹ *Register of Offenses, 1877–1881*, C & O Co.

¹⁴² Pope to Gorman, June 15, 1873, Ltrs. Recd., C & O Co.

¹⁴³ Herbert to President and Directors, Apr. 10, 1844, Ltrs. Recd., C & O Co.

¹⁴⁴ Although most of the boats had been named for their owners or members of their captains' families, many had been given colorful names over the years. A list of the coal boats navigating the canal in 1870 contained the following names: *Eagle*, *Vigilant*, *Invincible*, *Defiance*, *Emerald*, *Unexpected*, *Hawk*, *Owl*, *Peacock*, *Wren*, *Dalia*, *Energy*, *Hero*, *General Grant*, *Washington Irving*, *Kattskill*, *Rip Van Winkle*, *Brownbones*, *Napoleon Bonaparte*, *Six Days*, and *Wave*. Weber to Clarke, June 28, 1870, Ltrs. Recd., C & O Co.

Spirited, unruly, flamboyant, and lackadaisical boatmen were alike undesirable to the company, and the rougher ones were not permitted to use its boats. There was no longer room for romantic characters such as Captain John Malott of Williamsport whose mules were known for the white sheepskins with tasseled red rosettes that they wore on their tossing bell bows and whose boats were decorated with flags and political banners during campaigns. Traffic became regularized on a timetable basis.¹⁴⁵

The transition in the position of the boatmen in the changing canal scene had been in progress for some three decades. The growth of marked distinctions in canal society after the Civil War—officials, shippers, and “canallers”—mirrored in microcosm the development of the capitalist, middle, and laboring classes in the nation as a whole. The emergence of the waterway as a moneymaking, big business enterprise in the early 1870s tended to increase the difference by exerting pressure on the groups to maintain the *status quo* in order not to disturb the canal’s prosperity. The impact of the economic depression, which reached the canal in 1876, heightened the pressure on the boatmen. The directors insisted that the long-term benefits of maintaining the waterway as a going concern outweighed the immediate hardships to the boatmen, which might result. For this reason, strikes were crushed, wages and freight charges slashed, and canal trade regularized. The “canallers” were caught in a squeeze between the efforts of the coal companies and the canal company to reduce expenses. The coal companies, together with the boat builders, sought to increase their profits by maintaining boat rents and sale prices at high levels, reducing freight rates and calling for lower toll charges. To meet their continuing expenses, boatmen needed high freight charges. But the canal company, seeking to cut transportation costs to stay in competition with the Baltimore & Ohio and at the same time attempting to maintain tolls at a profitable level, demanded lower boat rents, sale prices, and freight charges. The Canal Towage Company represented the culmination of the late 19th century trends towards lower charges and complete control over coal transportation. Independent boatmen could not compete with the Canal Towage Company and its sponsors. A comparison of receipts and expenses of independent boatmen before the organization of the Canal Towage Company and the boats operated by that company indicates that the profits of the latter were some 42 percent greater than those of the former:

INDEPENDENT BOATMEN

Receipts	
90 tons @ 65 cents per ton	\$58.50
Expenses	
Boat rent	\$15.00
Mule hire	16.00
Waybills	4.80
Feed	5.00
	<u>\$40.80</u>
Profit Per Trip	\$17.70

CANAL TOWAGE COMPANY BOATS

Receipts	
90 tons @ 45 cents per ton	\$40.50
Expenses	
Waybills	\$4.80
Feed	4.00
	<u>\$ 9.80</u>

¹⁴⁵ Sanderlin, *The Great National Project*, 268–269, and *Baltimore Evening Sun*, August 12, 1937.

Profit Per Trip	\$30.70 ¹⁴⁶
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There is little documentary information on the boatmen following the organization of the Canal Towage Company. The only significant problem to arise with the boatmen occurred in 1918 when the canal carried coal for the government proving grounds at Indianhead, Maryland, some 30 miles down the Potomac River from Washington. The movement of coal down the canal was held up during the early part of the navigation season by labor troubles, which were resolved in part by granting higher wages to the boatmen operating the 80-boat fleet of the Canal Towage Company.¹⁴⁷

The only comprehensive study of the canal boatmen and their families during the operation of the waterway was undertaken in 1921 by the U. S. Department of Labor. The survey is interesting, because it offers data on the social, economic, and educational characteristics of the "canallers" in the waning years of the canal's existence.

The great majority of the captains on the canal had their wives and children with them on the boats. Of the 66 captains on the payroll of the Canal Towage Company, 59 were married men.¹⁴⁸ Of these, 41 had their children with them during the boating season. The number of children found accompanying their families was 135 (70 boys and 65 girls), of which 48 were under 7 years of age. In addition to these children, there were 7 boys employed on the canal boats as deck hands by captains to whom they were not related. The ages of the 7 boys were as follows: one, 11 years; four, 14 years; one, 15 years; and one, 16 years.

All the captains and their wives included in the study were Native American whites. Seven of the captains and five of the wives were illiterate. One captain, who had begun boating with his father when he was five years of age, reported that altogether he had gone to school for 29 months. By the time he reached the fourth grade the children of his own age had long since completed the grammar school grades, and he was ashamed to enter classes with younger boys and girls. Regretting his own lack of education he said that when his daughter reached school age he should stop boating.

The principal activities in operating a boat on the canal consisted of driving the mules and steering the boat. It was generally the child's job to drive the mules during the day either walking besides the mules on the towpath or riding the leader. Steering the boat by means of a "stick" which controlled the rudder could be accomplished by the pilot standing or sitting against it. Hence the mother of the family often handled the steering while attending to household tasks. Young children could steer light boats, while the older boys and men usually handled the steering chores for heavily loaded boats.

The ages of the children working on the boats ranged from 5 to 17, but those aged 14 years composed the greatest number in any single age grouping. However, the 11-year-olds composed the second highest number in any age category.

One of the boating households consisted of four persons—the captain, the assistant deck hand, the captain's wife, and their 11-year-old daughter. The girl had been driving, steering, and doing housework on the boat for several years, but she did not like boating and was very lonesome. Her father said that she could do anything that a hired hand could do, but he felt that it was necessary to employ a man because "you have to rest once in a while." Among other things, the captain observed that the "women and children are as good as the men" and "if it weren't for the children the canal wouldn't run a day."

¹⁴⁶ Sanderlin, *The Great National Project*, 269–270, and *Washington Evening Star*, July 11, 1905.

¹⁴⁷ *Washington Evening Star*, September 26, 1918.

¹⁴⁸ By 1921 the canal boats were operating in fleets, thereby necessitating fewer captains.

In 1920 most of the captains received less than \$1,250 from their boat work. About two-thirds of them supplemented their earnings either by winter employment or by incidental work during the season. For example, one man owned towing mules, which he hired out. Other captains secured small loads of incidental freight consisting of general merchandise, farm products, or supplies for the pleasure parks and summer campgrounds in the neighborhood of the canal. The captains were paid a uniform freight rate per ton amounting to \$75 or \$80 per trip.

The average size of the cabins on the canal boats was approximately 10 feet by 12 feet. All cabins had two bunks, one of which was set into the inner wall of the main cabin and the other located in the so-called "stateroom" which was partitioned off from the main cabin by a diagonal wall. The bunks were 36 inches wide—sufficient space for one person but ordinarily occupied by two. In addition to the cabin bunks, the feed box extending across the deck at the center of the boat was ordinarily used for sleeping purposes. This box, 4 feet high and 4 feet wide, provided a fairly comfortable bed by spreading blankets over the hay and other feed. It was used in some cases by the deck hands and occasionally by the children. Often in hot weather the floor of the deck was used as a bed, but some mothers stated that they were afraid to let the children sleep outside of the cabin.

In spite of the narrow berths, most families regarded them as adequate sleeping space for four persons. The feed box provided two additional sleeping places. Of the 41 families in the study, however, ten had seven members and nineteen had more than four persons. The most distressing instance of congestion existed where a family of nine lived on a boat. The mother said that she made a bed for the children on the floor, but "when you get seven down there, there ain't room left to walk around without stepping on them." The floors of the cabins were frequently bare, but fourteen families reported having linoleum coverings. One family stated that it was impossible to use any sort of covering as the floors leaked and were always damp.

The hours of travel on the canal were almost continuous. Fifteen hours a day was the minimum reported by any of the boat families. Eighteen hours the most frequently reported, but several families stated that they worked longer. One family had operated its boat without taking any intervals for rest. "It never rains, snows, or blows for a boatman, and a boatman never has no Sunday," said another. "Tell we see some folks along the way, dressed up and a-goin' to Sunday School." One captain and his wife who reported working 15 hours a day employed no crew but depended on the assistance of two children, a girl 14 years of age and a boy of 5. The girl did almost all the driving, usually riding mule back, and the parents steered. The little boy helped with the driving but not for more than a mile or two at a time. The boat was kept moving until the girl could drive no longer; then the boat was tied up for the night. "We'd boat longer if the driver felt like it," said the father.

Water for drinking and cooking purposes was secured from springs along the canal and stored in barrels or kegs. Water for washing clothes was obtained from the canal itself. Most of the families complained of mosquitoes.

Of the families visited for the study, five lived the year round on their boats, one having done so for eighteen years. All of the other families occasionally visited and spent the off-season in maintained houses along the canal. The dwellings were chiefly small detached wooden or log houses located in or near towns in the vicinity of the waterway within one mile of schools.

Numerous accidents had occurred among the boatmen's children. Forty-five children had fallen into the canal more or less frequently, eleven had been kicked by mules, one had been burned, one cut with an axe, and one dragged by a mule over a lock gate. One mother reported that her four children had many accidents. The oldest had his nose broken by a kick from a mule, and, with the exception of the baby, all had fallen into the canal many times. Once when a lock

tender had closed the gates too soon, the boat's awning had been dragged off the deck taking the children with it, thus pinning them between the gate and the boat.¹⁴⁹

E. TYPICAL EXPERIENCES IN THE LIVES OF THE 'CANALLERS'

The following narrative offers some typical features of the lives of the "canallers." The material is based primarily on three sources: Walter S. Sanderlin, *The Great National Project: A History of the Chesapeake & Ohio Canal* (Baltimore, 1946), pp. 186–188; *Baltimore Evening Sun*, August 9–13, 1937; and Ella E. Clark and Thomas F. Hahn, eds., *Life On the Chesapeake & Ohio Canal, 1859* (York, 1975), pp. 1–48. As these sources describe the canal experiences of the boatmen from the late 1850s to the early 1900s, the following data should be considered as representative only of that period.

1. Preparations for the Journey from Cumberland to Georgetown

In preparing for a journey down the 185-mile length of the canal, the boatman needed to obtain feed and provisions for his family and mules. Hay and feed for the mules was purchased at various establishments across from the coal loading wharves at the basin in Cumberland, the most popular store being Coulehan's on Wineow Street. Groceries were procured up Wineow Street at Dennis Murphy's or John McGrannis' or at Coulehan's. The usual staples taken along on a trip consisted of flour, sugar, coffee, smoked meat, and dry salt belly. As the sale of liquor was outlawed along the canal, alcoholic beverages also were purchased at the stores along the canal basin or at the numerous saloons, which operated in Shantytown around and behind the boatyards. Among the most popular drinking establishments that the boatmen frequented while waiting for a load of coal (or upon reaching Cumberland after a long journey up the canal) were Old Aunt Susan Jones' Rising Sun Saloon, Mis' Palmer's Red Tin Shanty, and the bars owned by George Burns, Ed Cooney, Gus Hensel, Dora Ogle, and Cherry Clark. If the captain's family was not large enough to provide the needed help on the boat, he made arrangements to hire a deck hand or two.

2. The Journey Down the Canal Begins

When all preparations were made, the captain backed his boat up to the coal chutes at the loading basin. The coal was dumped out of the railroad cars on a trestle over the chutes and passed down the chutes into the holds of the barge. After having received a waybill from the canal company collector, the boat commenced its run down the canal. A normal trip to Georgetown took about five 18-hour days. Although some boats ran all night, most tied up in groups of six or seven between 10 p.m. and 4 a.m.

The usual schedule of work both for the mules and the people was six hours of work and six hours of rest. Members of the captain's family generally slept in the cabin if there was room. Hired hands or older members of large families slept in the hay house, which had bunks on one side and feed on the other. Some boatmen took Sunday off to attend church services in the small towns along the canal, but most of the "canallers," who generally appeared to be an irreverent and irreligious lot, boated seven days a week if loads were available.

3. The Procurement of Food and Provisions on the Journey

¹⁴⁹ Ethel M. Springer, *Canal Boat Children*, Children's Bureau, Department of Agriculture, 1921, reprinted in *Monthly Labor Review*, 1923, 3–11.

Most everything that was needed in the way of groceries or feed could be purchased along the canal. There were numerous stores at many of the locks and in the villages in the vicinity of the canal that catered to the needs of the boatmen. In addition, most of the lock tenders raised milk cows, chickens, and gardens, the surplus of which was sold to the "canallers." Some of the boatmen, however, carried some chickens and one or two pigs on their boats to cut their expenses. The boatmen's diet was supplemented with fish taken from the canal.

4. The Role of Women on the Boats

The duties of women on the canal boats included cooking, child rearing, steering, washing, and sewing. It was often the woman's duty to help steer the boat and feed the mules. The cooking was done on the cabin stove, which was usually heated with burned corncobs from the stable. Some of the boats had more modern stoves, known as Star Light coal burners, made with coke tin by the Cumberland firm of William Moorehead and Lew Metz. Two of the most popular dishes among the boatmen were turtle soup made from turtles caught in the canal and blackberry pie made from berries that grew wild along the towpath. The women had their babies on the boats; if possible, the boat would stop at a town where services of a midwife could be obtained. Then the journey was resumed the following day with the man handling most of the cooking chores unless he had older children. The washing of clothes and bathing of children often was done at the side of the canal in the moonlight after the boat had tied up for the night. The sewing or mending of clothes and awnings for the barge frequently was done while the woman leaned against the "stick" that guided the boat's rudder. If the husband died, the widow often ran the boat herself, several such examples being Mis' Ziegler, Nancy McCoy, and Clara Dick.

5. The Children on the Boats

To prevent the little children from falling into the canal, there was usually a ringbolt in the cabin roof. The smallest children were buckled into a leather or rope harness and tied fast with a line to the ringbolt. By the age of six, most children were put to work driving the mules. Most captains got their start on the canal in that manner. The mules were driven with a four-strand plaited whip by the child walking along beside them on the towpath. The children were permitted frequently to ride the lead mule to protect their feet and to prevent them from tiring. The "canallers" children generally had little opportunity for schooling. Many times a teen-age boy was hired as a deck hand, a job for which he seldom received more than \$10 per month.

6. Approaching a Lock

When a boat approached a lock, the steersman got out his boat horn, generally a tin bugle, and blew the three notes of "Red Rover." Supposedly the boat horn was saying "Lock Ready! Lock Ready!" If there was no horn available, the steersman or driver, whoever had the loudest voice, would yell: "yea-a-a-a-a-a lock!" or "Hey-y-y-y-y-y lock!" Some boatmen used conch shells to announce their approach. During the day, the lock tender often saw the boat before he heard the call, but at night he had to be awakened.

7. The Mules

The mules, many of which came from Kentucky, were broken in by hitching them to logs. New mules, or "Greenies," often sat down and refused to move. This problem was solved by hitching

several trained mules to the "sitdowners" and dragging it along until standing up was more comfortable than sitting down. The mules were hard on their shoes, and, thus, they were reshod on an average of once a month.

Mules were generally purchased when they were 2 ½ years old. As a rule, they lasted some 15 years before they became too old and infirm to be of value. Each boatman usually kept two teams of two or three mules each with his barge. Good experienced mules often did not require a driver. They slacked off automatically by instinct when a boatman was snubbing a boat into a lock and once through a lock they took off on the cue of the steersman's whistle. If a boatman wished to change his teams, the mules reacted to verbal commands. Generally, the mules were changed while the boat was passing through a lock—a feat that required fast work. A short fallboard, much like a cleated gangplank, was thrown over the side of the boat when the water in the lock chamber was at its highest level, and a fresh team from the stable in the bow was herded out quickly. Reckless boatmen would change teams while the boat was moving by jumping a fresh team into the canal and swimming them to shore, while the gangplank was hurriedly thrown down on the towpath and the old team rushed on to the boat. This latter practice led to the drowning of many mules.

8. Dogs on the Canal

A good dog was a great help with the mules and was sometimes used to drive them. Sam Poffenberger had a bulldog named "Rough" who could swim across the canal basin at Cumberland with a towline around his neck. This was a great help when the mules and boats were separated on opposite sides of the basin.

9. Wintering Along the Canal

When the canal got icy, a canal company scow, loaded with pig iron, started up the waterway from Georgetown to serve as an icebreaker. Homeward-bound boats, all light and heading for winter quarters, formed a procession behind the ice breaker. As many as 40 mules from the boats in the procession would be hooked to the icebreaker's towline. The animals would haul the boat up on the ice and her weight would break a channel through which the boats would pass. The entire convoy would help pump water out of a barge if the ice broke a hole in it. The members of the procession also would hack at the ice with their axes if necessary. If a boat was frozen solid, the captain and crew closed it up and rode the mules home.

The boatmen tied up their boats as close to their homes as possible. The most popular communities where the boatmen spent the winter months were Monocacy Basin, Point of Rocks, Brunswick, Sharpsburg Landing, Williamsport, Hancock, and Cumberland. Of these communities, Sharpsburg was considered the greatest producer of boatmen over the years. A few boatmen lived on their boats year-round, and a few maintained homes where their families lived throughout the year.

In the early spring, the "canallers" would return to their boats. Before resuming navigation in the new season, they would house clean the barges, make necessary repairs, and give the vessels a fresh coat of paint. Once that work was done, the awning was spread over a portion of the deck and operations were commenced.

F. THE EMERGENCE OF LABOR UNIONISM AMONG THE CANAL BOATMEN IN THE 1870s

During the early 1870s the Boatmen's Union of Cumberland emerged as a strong force on behalf of the interests of the "canallers." As the first manifestation of labor unionism on the canal, this organization reflected the growing interest in such labor activities across the United States in the decade after the Civil War. During this period, two national labor organizations-- the National Labor Union in 1866 and the Knights of Labor in 1869--were formed for the purpose of exercising their economic and political power to better the lot of the common working man in America.¹⁵⁰

Organizing efforts were also occurring among the western Maryland coal miners at this time, and wage disputes between the miners and the coal company operations led to the first strike in May and June of 1865.¹⁵¹

The first recorded strike by the canal boatmen occurred at Cumberland in July 1871. The two-day work stoppage was joined by the dock laborers in that town. According to the word received by President James C. Clarke on August 28, the difficulty

was occasioned by a few irresponsible men urged on by a few of the boatmen who were stated to have been imposed on by the Maryland (Coal) Co. by being obliged to pay a bonus. We (The Maryland Coal Company) reduced the freight, to (the) same basis on outside boats (those vessels not employed by the coal company) or five cents per ton, but to those running our own boats we have the spring rates of \$1.45 per ton.

The informer went on to express his fears that another strike was brewing among the boatmen:

Now the Maryland (Coal) Co. pays only \$1.40 to all classes of boats, and still exacts the bonus . . . and the result of another strike is threatened. If it were to be confined merely to those who aggrieved, no one would object, but you may rest assured if a dozen of the men see fit to make the trouble, all will become involved and this will incur the daily loss of \$25,000. If once begun, the loss all round will amount to hundreds of thousands. Why should these vast interests be paralyzed...by a few discontented men, hiring roughs to intimidate the well disposed.¹⁵²

Sometime during the remainder of the 1871 boating season an eleven-day strike of the boatmen and Cumberland dock workers took place.¹⁵³

It is apparent that the canal company attempted to prevent the labor unrest by ordering that the participating boatmen be fined for their activities. Later the board had second thoughts about the wisdom of this policy, and on January 12, 1872, it authorized Coale to remit the money collected in those cases that merited such consideration. The balance of the money collected was to be appropriated to the treasury of the Boatmen's Benevolent Society, an organization that had been formed, recently to foster the welfare of the "canallers."¹⁵⁴

¹⁵⁰ Foster Rhea Dulles, *The United States Since 1865* (Ann Arbor, 1969), 68–81, and Michael Martin and Leonard Gelber, *The New Dictionary of American History* (Revised, New York, 1965), 335, 340–41, 425.

¹⁵¹ *Thirty-Seventh Annual Report* (1865), C & O Co., 6.

¹⁵² Slack to Clarke, Aug. 28, 1871, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, M, 426–427.

¹⁵³ *Proceedings of the Stockholders*, E, 182.

¹⁵⁴ *Proceeding of the President and Board of Directors*, M, 506.

There were no further labor difficulties along the canal until January 1873. In that month, the president of the Boatmen's Benevolent Society sent a stern letter to the canal board protesting against the directors' proposal to raise the toll on coal from 46 cents to 51 cents per ton. The letter, which indicated the increasing militancy of the society, read as follows:

The Boatmen's Benevolent Society do petition your honorable body against any increase of tolls on coal, as we consider such an advance an injury to the business and interest of the canal; also ruinous to the interest of the boatmen, to keep the cost of transportation on the canal at the basis of last season would require an equivalent decrease of freight, to which we the boatmen will not submit. Gentlemen, this association desires that the toll on coal should remain at the same rates as that of last Season. We refer you to the decrease of freight on coal by way of (the) canal, for the last two seasons of ten cents per ton. Submitting to a deduction of five cents each season, and any advance on tolls at this time in all probability would cause a further decrease, and for this reason just stated we earnestly enter our protest.¹⁵⁵

The underlying reasons for the boatmen's concern over the canal directors' proposal to increase the toll on coal were given in a report in the *Williamsport Pilot* of January 11. According to the newspaper's editor, the boatmen at that town all felt

that such an increase will only amount to a tax upon them. They are certain that in the end they will have to pay it. The past season was altogether an unprofitable one. In fact many boatmen actually lost money, and we much doubt if half the coal could be shipped over the canal during the coming season if the tolls are increased. It should be remembered that hay and feed commanded an unusual price, and of the first name article the prairies of Illinois had to be depended for a supply, which is sufficient to indicate its price.

The coal companies have every advantage of the boatmen; they can regulate freights with a rule as imperious as the Czar of Russia. They of course will put freights down just in proportion as the canal company raises tolls.¹⁵⁶

Despite the protests of the boatmen the canal board approved the five-cent increase in the toll on coal on February 13. The boatmen were angered still further on March 11 when a petition from the Boatmen's Benevolent Society requesting the suppression of the illicit liquor traffic along the line of the canal received no comment from the directors. Consequently, a strike was called, but apparently it was of short duration because company officials reported that it merely caused a delay in commencing the coal shipments in March.¹⁵⁷

¹⁵⁵ Rosewann to Gorman and Directors, Jan. 1, 1873, Ltrs. Recd., C & O Co., and *Proceedings of the President and Board of Directors*, M, 94.

¹⁵⁶ *Williamsport Pilot*, Jan. 11, 1873, in Gorman Collection. The increasing militancy of the boatmen was also in part an effort to make up for financial losses sustained in November 1872 when an epidemic had killed many horses and mules along the canal. The epidemic was of such severity that the company estimated that it reduced the total tonnage for the canal by over 20,000 tons that month. *Forty-Fifth Annual Report* (1873), C & O Co., 3. Mulvany to Gorman, Nov. 9 and 16, 1872, Ltrs. Recd., C & O Co., and *Williamsport Pilot*, Dec. 21, 1872, in Gorman Collection.

¹⁵⁷ *Proceedings of the President and Board of Directors*, M, 102, & *Forty-Fifth Annual Report* (1873), C & O Co., 3.

There was relative labor calm on the canal until August 24, 1874, when the boatmen again called a strike at Cumberland, demanding that the current freight rates be raised from \$1.25 to \$1.35 for transporting a ton of coal from Cumberland to Tidewater.¹⁵⁸

The following day a mob of some 200 persons marched to the coal loading wharves and, using threats of violence, prevented the loading of any boats manned by captains who were transporting coal at \$1.25 per ton. The strikers camped on the wharves with rations of "bread and beer" and vowed to poison the mules and injure the crew of any boat that loaded at the lower rate.¹⁵⁹

On August 26 the striking boatmen held a public meeting at Cumberland to consider their grievances, and the principal address was given by Mr. McCardell, the editor of the *Cumberland Times*. The "canallers" took the position that the coal companies could not afford to pay more than the present reduced freight rates—\$1.20 and \$1.25 per ton to Georgetown and Alexandria respectively—and that the boatmen could not afford to carry coal at those rates. Furthermore, the canal company should reduce the toll on coal to 36 cents per ton and give the extra 15 cents to the boatmen instead of to the company bondholders. The boatmen resolved to adhere to their demand that the freight rates should be at the level that was agreed upon in the spring—\$1.35 per ton to Georgetown and \$1.40 to Alexandria. Committees were appointed to provide liaison between the coal mine operators and the boatmen and to address the canal company with a petition to carry out the "McCardell Plan."¹⁶⁰

Although the strike was called to address the specific grievances of the boatmen, the canal board received word that other factors were involved in the labor unrest. There were indications that some of the coal companies were promoting the strike. There was an over-supply of boats for the coal trade, and the coal companies were embroiled in "considerable competition...with no little cutting and gouging." The only company that was not involved in the work stoppage was the Borden Coal Company, which agreed to pay the higher freight rate demanded by the boatmen. Thus 9 to 12 of its boats were leaving Cumberland every day unmolested for the trip to Georgetown.¹⁶¹

By September 1 the striking boatmen had increased their numbers by enrolling some 200 captains in a "secret association." Many of the boatmen of the Maryland Coal Company, who had originally opposed the strike, now were in full support. The boatmen had increased the rates to Williamsport, Shepherdstown, and Antietam, as well as to Georgetown and Alexandria. The canal basins at Cumberland were blocked entirely by boats. However, there was little excitement reported, as the boatmen were "moving about quietly," but manifesting "a determined spirit to stand firm, and refuse to load, except upon the terms demanded."¹⁶²

Two days later on September 3 President Gorman received word that the strike was about to be broken. The Consolidation Coal Company had decided the previous day to load its boats at the higher freight rates, and the agent of the New Central Coal Company had been instructed by his firm's headquarters in New York City to yield to the demands of the "canallers." However,

¹⁵⁸ Weber to Gorman, Aug. 24, 1874, Ltrs. Recd., C & O Co.

¹⁵⁹ Greene to Gorman, September 14, 1874, Ltrs. Recd., C & O Co. The coal companies appealed to the local authorities to disperse the unruly crowd, but upon consultation with the State's Attorney, it was decided not to intervene unless there was an overt act of violence. As the few boatmen who were willing to work for the lower freight rate were intimidated quickly into abandoning their boats, there were no such incidents.

¹⁶⁰ Weber to Gorman, August 26, 1874, Ltrs. Recd., C & O Co.

¹⁶¹ *Ibid.*

¹⁶² Weber to Gorman, September 1, 1874, Ltrs. Recd., C&O Co. The "secret association" referred to in this letter is the first reference to the organization of a boatmen's labor union.

the Maryland, American, Hampshire, Georges' Creek, Blaen Avon, and Atlantic Coal Companies had not indicated a change of position.¹⁶³

When the strike still had not been settled by September 8, President Gorman requested from the various coal companies information relative to their understanding of the stalemate and to the causes, which led up to it. One such reply was given by J. W. Pearce, the Agent of the Maryland Coal Company:

To show how the general public are deceived by the operations of Monopolies, and the "outside appearance of affairs when local Journals familiar with the Causes, either from fear of losing popularity for some pet Candidate for office or other interests; conceal the real evil under the cloak of ignorance of the cause, and only briefly notice the passing event – will you give some space in your valuable paper to this statement, so as to let the people of the State of Maryland understand how one of their great public works is paralyzed by the operations of a ring of Conspirators who are enriching themselves by despoiling the Stock Holders of the Companies they are employed by; and the people, whose public work they abuse. As will appear by reference to the Cumberland papers, "a strike has been in progress for some time among the Boatmen on the Ches & Ohio Canal!"

From this brief notice the Stockholders of Coal Cos. and the public would naturally suppose it originated in a demand of the Boatmen for higher freights. If, however, you will go to the bottom of the trouble you will find it has been 'hatched up & egged on' by the agents or Managers of some of the Coal Cos., in conjunction with a part of the Boat Building interest at Cumberland.

Their object is to keep up a high rate of freight on the Canal, so that they may be enabled to dispose of Boats at enormous prices. In furtherance of this object by maintaining the Freight, they Crowd their lines with more boats than are required to carry their coal; thus depriving their Companies of the advantages of lower rates, and The Boatmen to whom those high-priced Boats are sold of the necessary amount of freighting to enable them at any promised rate, to make money by good running.

When the great 'law of supply and demand' begins to operate in favor of another Company who have been shipping Coal on a *lone business basis*, and who endeavor to have their Coal freighted as *Cheaply* as possible, by telling its Boatmen to buy Boats and supplies at the *lowest* market rates, instead of *forcing* them into paying exorbitant prices, and by giving *steady* employment to large numbers of otherwise unemployed Boatmen, thus largely more than paying their expenses (for while lying idle waiting for their Companies to load them, the expenses are as great as when running) them; in order to bring things back to that happy state where the Coal Cos. shall pay the Boatmen enough to enable them *to lie idle* and thus prosper the Boat business at the expense of the Coal Trade; a few irresponsible & reckless boatmen are employed to get up 'a Strike' and *by force* prevent these men (who are glad to get loads even at lower rates than the 'Ring' proposes) from doing as they see fit with their own labor & property; and so it comes to pass, that in order that a few 'Conspirators' may grow rich, a stoppage of work for weeks is caused; to the injury of the Miners; the Cumberland & Pennsylvania Rail Road—that brings Coal to the Canal—the Boatmen, the Ches & Ohio Canal, the various Coal wharves & schooners engaged in the Trade, and often causing loss & embarrassment to the Coal Companies. Were it not for this forcible interference the principle on which the Maryland Coal Co has been working this season—'Dispatch in loading and unloading for

¹⁶³ Weber to Gorman, September 3, 1874, Ltrs. Recd., C&O Co.

a Concession in freights,' would become general, to the improvement of profits by the Canal Co, the Boatmen and the Coal Cos. For 3 loads per month @ \$1 per Ton for 112 Tons is \$366.00, which would require \$1.50 per Ton to equal it,, with only 2 loads per month, and Two loads per month this season, is over the average, in such Companies as have let the Agents put in more Boats than the business required.

There has been much talk and abuse of the Canal Co for not paying dividends on account of being 'a political machine,' the foregoing facts have much to do with its small receipts; for high Freights & Tolls inevitably drive the Coal Trade from the Canal to the Rail Roads.¹⁶⁴

As the strike wore on, the canal board considered various means to break the stalemate. They considered the passage of an order to prohibit the future navigation of all boats whose owners had been "instrumental in promoting strikes or disaffection among the boatmen." The directors also considered the expansion of the proposed ban to include the boats "owned in whole or in part" by the Cumberland boat builders who had encouraged the unrest. The board apparently gave up these ideas since their enactment would have alienated some of the coal companies on whose trade the canal depended and some of the boat builders on whom the "canallers" relied for the construction, maintenance, and repair of their barges.¹⁶⁵

The devastating impact of the strike on the canal's trade and revenue was assessed by President Gorman at a board meeting on September 10. Had it not been for the work stoppage the tonnage and revenue for August would have exceeded any previous month in the history of the waterway. During the period from August 26–31, the average shipments on the canal per day were 1,394 compared with a pre-strike daily average of 4,925. Thus, the work stoppage had been responsible for the loss of 21,186 tons of trade during the last six days of that month. Gorman concluded by expressing his fears that the frequent recurrence of strikes by the boatmen would not only reduce the revenues of the company but that they would force the coal companies to take their trade to the railroads. Accordingly, he recommended that a committee be appointed to investigate the causes of the strike and to confer with the coal companies concerning an effective solution to the recurring problem.¹⁶⁶

The investigation of the strike by the committee uncovered serious abuses in the system of boating then in operation on the canal, which tended to support the boatmen's position. While the strikes, which drove the canal trade to the railroad, were suicidal to the boatmen, it was found that the "canallers" could not pay their expenses at the \$1.25 freight rate. Accordingly, the boatmen had been taught to believe that (1) higher freight rates were the sole remedy, (2) the coal companies would not accede to the higher freights unless the canal company reduced its tolls, and (3) the canal company, as a semi-political corporation, should eliminate the toll on loaded boats.

The committee concluded that the boatmen's reasons for their financial difficulties were inaccurate. In its report, the members informed the board that the real reason for the plight of the boatmen was the exorbitant cost and the unfair purchase terms of the canal boats. A large proportion of boats on the waterway had been built by local capitalists in Cumberland at an average cost of about \$1,400 each. The usual custom was for the builder to make arrangements with the agent of one of the Allegany County coal companies to take the boat into the company's line (i.e., to

¹⁶⁴ Pearce to Gorman, Sept. 8, 1874, Ltrs. Recd., C & O Co.

¹⁶⁵ Ray to Gorman, Sept. 9, 1874, Ltrs. Recd., C & O Co.

¹⁶⁶ *Proceedings of the President and Board of Directors*, M, 176–77.

transport that company's coal exclusively). The builder would then sell the boat to a "canaller" who was usually poor and unable to pay for the purchase with cash. The builder would advance the sum of \$800 to \$1,200 to the boatman, and this amount was to be repaid in regular installments to be deducted at the end of each trip on the amount paid for freight.

The boatmen were helpless to resist such practices, because they were forced to agree to the terms if they wanted to work. Hence they commenced their work by paying not only a fair value for their boats but also an "extortionate" bonus. Added to these expenses were the cost of their teams and outfits at greatly inflated prices.¹⁶⁷ Thus, the boatmen needed higher freight rates from the coal companies to pay the average trippage costs of \$35 to \$40 and to live. In most cases, it would take the boatmen three or four years of hard labor to pay off their debts if the freight rate was \$1.35 per ton.

Once a boat was paid off, the boatmen were subject to other unfair monopolistic practices. As soon as a boat was paid for, the Cumberland boat builders often had a new one ready to take its place. The agent of the coal company would then remove the old boat from the line so as to make room for the new one for the profits to be derived from it. This practice had continued for so long that there were a large number of boats owned by regular boatmen who were not in the line of any coal company. Those individuals were compelled to obtain loads wherever and from whomever they could or to pay trippage to gain admission back into a line. Thus, there were about 100 boats more than were needed for the coal trade on the waterway.

In the spring of 1874 the Borden Mining Company determined to take advantage of the large pool of "outside" boats by employing a sufficient number of them to carry its coal. The company set down three conditions for this arrangement: (1) to employ a sufficient number of boats to accommodate the trade; (2) to keep the boats in port no longer than 24 hours; and (3) to enable boats to make 3 ½ trips per month without paying trippage.

Some of the boatmen accepted this proposition at a reduced freight rate of \$1.25 per ton, and within a short period all of the coal companies had reduced their rates. This state of affairs continued until August 25 when the boatmen paying trippage found that they could not make a living while the boats not paying trippage were realizing fair profits. It was found that the "outside" boats making 3 ½ trips per month at a freight rate of \$1.25 were producing gross receipts of \$490 per month. On the other hand, the "line" boats, which averaged about 2 ½ trips per month at the same freight rate, were realizing monthly gross receipts of \$350 from which approximately \$75 had to be subtracted for trippage.

The committee concluded its report by urging the canal board to induce the coal companies to break up the system of "middlemen" in the sale of the canal boats. If the boats were furnished at a fair price and the boatmen were given constant employment, the cost of transportation would be reduced and the "canallers" would realize greater profits. At the same time, the committee fully endorsed the company policy of providing police protection to the coal companies during the strike. Furthermore the members supported the strict enforcement of the company rules, which imposed heavy penalties on any person interfering with the loading of a boat or preventing any boat from proceeding on the canal by intimidation or threats of personal violence.¹⁶⁸

¹⁶⁷ The average cost of mules during the 1870s and 1880s varied greatly. Common mules varied from \$25 to \$200 a head or \$250 a pair. A team of four good, experienced mules together with their harnesses sold for prices of up to \$1,400. Such sales were made on terms similar to those on boats. *Baltimore Evening Sun*, Aug. 12, 1937.

¹⁶⁸ *Proceedings of the President and Board of Directors M*, 180-85.

Normal operations on the canal were not resumed until late September when all of the coal companies agreed to pay the \$1.35 freight rate demanded by the Boatmen's Union. Apparently, the last company to agree to the higher rate was the Maryland Coal Company, which had transferred its daily 1,000-ton trade to the railroad shortly after the strike commenced. When the company resumed its shipments on the canal, it reemployed a number of its old boatmen at the increased rate. Then the strikers attempted unsuccessfully to dictate to the company what boats it should employ.¹⁶⁹

The Boatmen's Union continued to harass the movement of those "outside" boats whose owners continued to ship at lower rates, but there were no more reports of violence during the remainder of the boating season.¹⁷⁰

Prior to the opening of navigation on the canal in 1875, the Boatmen's Union met in Cumberland to adopt the freight rates for the year. The rates, which were not to be subject to any fees, bonuses for loading, or drawbacks, were as follows:

To Hancock	\$.50
To Williamsport	.70
To Shepherdstown	.90
To Antietam	.90
To Harpers Ferry	.95
To Knoxville	\$1.00
To Point of Rocks	\$1.05
To Georgetown	\$1.35
To All Points in Washington	\$1.40
To 1 st and 2 nd Boat Yard, Alexandria, Canal	\$1.37
To Four Mile Run	\$1.38
To Alexandria	\$1.40

At the same time, the Boatmen's Union organized itself into a mutual life insurance association and contemplated certain other cooperative ventures for the benefit of the "canallers." The official membership of the union was reported to be 324 with control over 374 boats.¹⁷¹

The Boatmen's Union continued its efforts to intimidate the nonunion boatmen. On the night of January 8 three boats tied up near Lock No. 38 and one boat on the Four-Mile level were burned. Had it not been for the quick arrival of the fire engine from Shepherdstown, the whole fleet of boats lying at Shepherdstown would have caught fire.¹⁷²

During the winter of 1874-1875, the canal company leased the Lynn-owned Potomac Wharf at Cumberland for a period of two years, thus putting it in a position to reduce the exorbitant wharf fees charged by the private wharf owners in that town. Such an action, coupled with earlier efforts to lower wharf charges in Georgetown, would make it possible for the company to reduce soon the cost of transporting coal over the waterway by some 12 cents per ton.¹⁷³

¹⁶⁹ *Ibid.*, M, 180.

¹⁷⁰ Brandt to Gorman, Oct. 27, 1874, Ltrs. Recd., C & O Co.

¹⁷¹ *Cumberland Times*, Jan. 23, 1875, in Gorman collection. As there were some 539 boats registered on the canal at this time, the union, according to this report, controlled about 70 percent of the vessels plying the waterway.

¹⁷² McGraw to Gorman, Jan. 9, 1875, Ltrs. Recd., C & O Co.

¹⁷³ *Cumberland Daily News*, Mar. 2, 1875, and *Cumberland Daily Times*, Mar. 20, 1875, in Gorman Collection, and *Forty-Seventh Annual Report* (1875), 19-21.

AVERAGE BOATMEN'S EXPENSES PER DAY

as reported in the *Williamsport Pilot*, Feb 20, 1875

CAPTAIN	\$1.00
STEERSMAN	.83
DRIVER (2 @ 50¢ each)	1.00
BOARD FOR HANDS	2.00
ANIMAL FEED	2.00
ANIMAL SHOEING	.25
LINES	.50
TRIPPAGE	3.50
TOLLS	<u>.40</u>
	\$11.48

COST OF TRANSPORTING ONE TON OF COAL ON
THE CHESAPEAKE & OHIO CANAL 1873-75,as reported in the *Cumberland Daily Times*, Mar. 20, 1875

TOLLS	\$.510
WHARFAGE AT CUMBERLAND	080
COMMISSION TO AGENTS	.025
FREIGHT RATE (185 MILES)	1.350
WHARFAGE AND HANDLING AT GEORGETOWN	<u>.250</u>
	\$2.215

When navigation resumed in March, members of the Boatmen's Union commenced a series of threats against the nonunion boatmen at the Potomac Wharf. Efforts were made to frighten them from loading their boats by telling them that their mules would be poisoned and that all boats would be prevented from descending below Sharpsburg. Accordingly, the canal company requested that the Mayor of Cumberland authorize the canal's watchman at the wharf to arrest those who were disrupting the operation of the canal.¹⁷⁴

On April 6, 1875, the canal board ordered a general reduction of charges, including toll, wharfage, and freights. This was done in order to maintain its competitive position in the coal trade with the Baltimore & Ohio Railroad and to placate the Boatmen's Union. The toll on coal was reduced by 8 cents to 43 cents per ton, and the freight and wharfage rates were decreased by 10 cents and 2 cents respectively.¹⁷⁵

Boatmen's Union still was not satisfied completely with the financial arrangements for the 1875 boating season. A delegation from the union met with the board on April 13 and proposed a compromise solution to the stalemate. The union members would boat at a freight rate of \$1.25 for the season and rescind their claim of demurrage if the boat owners would reduce trip-page fees to a flat rate of \$30 and the canal company would reduce its \$4.08 toll on loaded boats by 50 percent. Next a group of boat owners, headed by Frederick Mertens of Cumberland, met with the board, and after a heated debate, they agreed to the boatmen's demands provided the company would do the same. Accordingly, the directors passed the following resolution:

¹⁷⁴ Tilghman to Gorman, April 1, 1875, Ltrs. Recd., C & O Co.

¹⁷⁵ *Proceedings of the President and Board of Directors*, M, 210-11.

Whereas the Boatmen cannot secure a reduction in their trippage of more than five (5) dollars, and therefore cannot afford to reduce the charges for freight 10 cents per ton, without some relief on the part of the Company.

Therefore, resolved, that so long as the rates for freighting coal to Georgetown shall not exceed \$1.25 per ton, the toll on through boats shall be charged at the rate of \$2.04, each way, and the rate for way coal boats shall be 1 ¼ cents per mile, each way, during the present season of navigation.¹⁷⁶

Although their demands had been met, some of the union members remained embittered. As a result, a series of incidents were perpetrated against the nonunion "canallers" and the property of the canal company. On the night of April 14 the towpath was cut at a point about 3/4 mile below Grove's warehouse on the Antietam Division. It was reported that "depredations of some kind" were being committed every night in the vicinity of Sharpsburg.¹⁷⁷

Several days after the towpath was cut, a boat was stoned near Harpers Ferry, because the captain was transporting coal at "ruinous rates." In commenting on this incident, the *Williamsport Pilot*, which was supporting the Boatmen's Union, informed its readers that those boatmen who contracted to transport coal at lower rates deserved no sympathy if their boats were burned. Such independent action was an invitation to the union members "to take more effectual measures" for getting rid of such boats.¹⁷⁸

Some union men attacked the *Kate Prather* captained by Lewis F. Fernsner on the night of April 20 at a point some three miles below Cumberland, breaking the boat's windows and shutters with stones.¹⁷⁹

On the same evening the *J. Baker* was stoned on the Antietam Division.¹⁸⁰

To find out and prosecute the parties that were perpetrating these incidents, the canal company had its officials scour the countryside for leads and information. Furthermore, the company pressured Washington and Allegany County officials into conducting grand jury investigations into the problem. As a result, four leaders of the Boatmen's Union—James Hitechew, Taylor Reid, Peter Wolf, and Thomas O'Donnell—were indicted by the grand jury at Cumberland. After a lengthy trial in the Allegany County Circuit Court the four men were convicted on January 24, 1876, of forming a "conspiracy to control the rate of freight on coal transported over the C & O Canal." When the men were brought up for sentencing two days later, the judge "called attention to the gravity of the offense, and admonished boatmen, coal companies, and all others, that any combination to control prices by which the business of the community" was interrupted was "illegal and contrary to the common law." However, as this was the first case of its kind to be tried in the county, the magistrate made the penalty as light as possible, imposing a fine of \$25 plus the prosecution costs amounting to \$18.40 on each man.¹⁸¹

There was relative calm among the boatmen on the canal until June 21, 1877, when a group of "canallers" struck again to protest a decrease in the freight rates. A number of boatmen tied up their vessels on the first level west of Seneca where they awaited some redress from their grievances, far from the reach of the coal companies and the canal directors. At the upper end of the line, some 24 boats tied up at Lock No. 74 where they effectively closed the canal to traffic

¹⁷⁶ *Ibid*, M, 212; Ketchese to Gorman, Apr. 9, 1875, Ltrs. Recd., C & O Co.; and *Cumberland News*, Apr. 17, 1875, in Gorman Collection.

¹⁷⁷ McGraw to Stake, Apr. 15, 1875, Ltrs. Recd., C & O Co.

¹⁷⁸ *Williamsport Pilot*, Apr. 17, 1875, and *Baltimore American*, Apr. 29, 1875, in Gorman Collection.

¹⁷⁹ Tilghman to Gorman, Apr. 21, 1875, Ltrs. Recd., C&O Co.

¹⁸⁰ McGraw to Gorman, May 4, 1875, Ltrs. Recd., C&O Co.

¹⁸¹ *Cumberland Times*, Jan. 26, 1876, in Gorman Collection.

pending a successful resolution of their demands. The strike lasted for two months, during which trade on the canal sank to negligible proportions. The men finally resumed their runs on August 20, but by that time many canal skippers had made arrangements with the railroad for the transportation of their business for the rest of the year.¹⁸²

The canal company records indicate that there was relative calm on the canal in 1878 and 1879. In April of the latter year a petition signed by numerous boatmen was presented to the directors, asking that the charge for trimming boats at the company wharves in Cumberland be reduced from \$1.35 to 75 cents per boat. A cursory review of the board's proceedings indicates that no action was taken on the requests and that no overt incidents resulted.¹⁸³

The financial distress of the boatmen led to another two-month strike beginning in late June of 1880. The plight of the "canallers" was the result of the general nationwide business depression and the consequent deflationary tendency of coal prices. The price of a ton of coal on board vessels at Georgetown, which had been \$4.65 in 1872, had fallen to \$2.60 by 1879. Because of this decline the amount paid for transporting a ton of coal from Cumberland to Georgetown and placing it on board a vessel at the latter port had fallen also from \$2.24 in 1872 to \$1.35 in 1879. The breakdown of these latter figures shows the desperate situation in which the boatmen were trapped:

	1872	1879
Received by boatmen	\$1.35	\$.75
Wharfage at Cumberland and Georgetown	.43	.04
Transfer fees at Georgetown	.00	.20
Canal company tolls	<u>.46</u>	<u>.36</u>
	\$2.24	\$1.35

The 1879 rates provided neither the boatmen, the wharf owners, nor the canal company with adequate revenue, but little could be done to increase them so long as the value of coal on board vessels at Georgetown remained less than \$3 per ton.¹⁸⁴

The eight-week strike, which extended from late June to late August, had a serious impact on the revenues of the canal company. The average weekly coal tonnage carried on the canal during the two months prior to the strike was 21,374 tons, while the average weekly tonnage during the strike was 13,870 tons. It was estimated that the strike resulted in a loss of some 75,000 tons of coal and some \$45,000 in revenues to the company.¹⁸⁵

The strike not only hurt the company's financial condition, but it also led to serious rioting at Sharpsburg landing, Williamsport and Millstone Point in July and August. Boats were stoned at these three localities, and other acts of violence were perpetrated in an effort to disrupt the entire navigation on the waterway. The company requested that the Washington County Commissioners send all available "sheriffs, detectives, and agents" to the three locations to investigate and to suppress the violence. In September the County Commissioners reported that the total cost of its anti riot operations had cost more than \$3,000. At the request of the State's Attorney for Washington County the canal company reimbursed the County Commissioners for \$1,000 of this sum.¹⁸⁶

¹⁸² *Fiftieth Annual Report* (1878). C & O Co., 3, 6; *Proceedings of the President and Board of Directors*, N, 4; and Stanhope to Gorman July 1, 1877, Ltrs. Recd., C & O Co.

¹⁸³ *Proceedings of the President and Board of Directors*, N, 81.

¹⁸⁴ *Fifty-First Annual Report* (1879), C & O Co. p.12, and *Fifty-Second Annual Report* (1880), C & O Co., .7.

¹⁸⁵ *Proceedings of the President and Board of Directors* N, .117-19.

¹⁸⁶ *Ibid*, N, 120-121.

No boatmen's strikes occurred on the canal during the remainder of the 1880s—a decade marked by trade stagnation, financial depression and physical deterioration of the canal company and the waterway itself. In fact, there appears to have been little union activity among the boatmen during this period. The one exception took place in February 1883 when a petition signed by ten boatmen at Williamsport was sent to the board requesting a redress of six grievances.¹⁸⁷

The six demands were as follows: (1) the reduction of trimming rates for loaded boats at Cumberland from \$1.30 to 75 cents, (2) the cleaning out of regular trying-up places and the planting of posts along the canal so that boats could tie up at night on the berm bank; (3) the enforcement of a Sunday law that would compel all boats to tie up at 12 o'clock midnight on Saturday; (4) the clearing-out of the basin at Cumberland that led from the Basin Wharf to the main stem of the canal so that boats could navigate that course; (5) the reduction of tolls and wharfage from 55 cents to 45 cents; and (6) the removal of the Baltimore & Ohio Railroad treating from the towpath between Locks Nos. 73 -75. The canal directors responded to the petition by promising to reduce tolls and wharfage fees at Cumberland to 40 cents per ton on coal and to decrease the cost of terminal facilities at Georgetown by 10 cents, but took no other action.¹⁸⁸

G. FEED AND GROCERY STORES

The boatmen on the canal required large quantities of staples, groceries, and vegetables for themselves, their families, and their hired hands. Among the items that the boatmen needed were flour, sugar, coffee, smoked meats, dry salt belly, and bread. The "canallers" also were in need of large amounts of hay, feed, and provender for their mules employed on the waterway. The mules consumed an annual minimum of 25,000 barrels of corn, 3,840 bushels of oats, and several thousand tons of hay at a cost of some \$60,000.¹⁸⁹

Up until 1850s the boatmen generally purchased their food and feed in Georgetown or Cumberland before beginning their journey. Along the way, they would procure additional supplies in the small towns adjacent to the canal. Often they would buy vegetables from the lockkeepers, some of whom raised large gardens, and local farmers would sell the boatmen hay and feed.

By the late 1850s, however, the canal board had received numerous applications for permission to erect feed and grocery stores along the canal to accommodate the growing trade. Recognizing the need for such stores, the board on September 3, 1858, authorized the Engineer and General Superintendent to permit the construction of such stores where they were needed along the line of the canal. The following conditions were to be made a part of any agreement to construct such stores: (1) the ground rent was to be at least \$12 per year; (2) no intoxicating beverages could be sold; (3) the businesses were not to interfere with the navigation of the canal; and (4) the company could revoke the privileges granted upon 30 days' notice.¹⁹⁰

During the next three decades at least 27 grocery and feed stores were built along the line of the canal. Most of them were built in the decade after the Civil War. The location, type, proprietor, and date of these stores were as follows:

Lock No. 6—On December 4, 1873, permission was granted to Levin B. Stine to erect a feed store.

¹⁸⁷ The boatmen who signed the document were E. P. Steffey, George W. McCardell, E. Donnelly, J. Morrison, W. C. McCardell, William Kimble, M. Stitzel, Henry Singer, H. C. Ardinger, and Victor Cushwa.

¹⁸⁸ Proceedings of the President and Board of Directors, N, 208–09.

¹⁸⁹ *Williamsport Pilot*, Feb. 8, 1873, in Gorman Collection.

¹⁹⁰ Proceedings of the President and Board of Directors, K, 61–62.

Lock No. 10—On February 13, 1873, permission was granted to Mikeal Q. McQuade to lease 60 feet of ground to build a provision and feed store.

Lock No. 13—Prior to August 1871, permission had been given to David Lorence to build a feed store. In that month his request to lease for ten years a plot of ground, 12 x 30 ft. for the purpose of enlarging his store was rejected.

Seven Locks—On December 4, 1873, permission was granted to Mrs. M. A. Douglas to rent land at the rate of \$36 per year to build a feed store and to raise a large garden.

Lock No. 20—On June 24, 1851, the board authorized the General Superintendent to rent the Ball Room at Crommelin House for the use of the company in return for allowing Daniel Collins, the tender at Locks Nos. 19 and 20, to operate a grocery store in the building.

Lock No. 20—On October 12, 1869, Howard A. Garrett was granted permission to erect a feed store on the towpath side of the canal and to lease a plot of ground (50 x 28 feet and 16 feet from the lock wall) for ten years at an annual rent of \$20. The lease was renewed at least once, because the Montgomery County Circuit Court records indicate that Garrett was still operating feed and provision store as late as 1887.

Lock No. 22—On March 9, 1870, permission was granted to George S. Garrett to build a feed store at the annual rent of \$36. Some time later, the building was destroyed. Accordingly, he applied for and received permission on May 9, 1871, to build a new hay and feed store (20 x 24 feet) between the flume and the lock on the berm side of the canal.

Guard Lock No 2.—On December 8, 1870, permission was granted to John R. Connell to erect a feed store on the towpath near the guard lock. Connell operated the store for approximately one year and then vacated the premises. By May 1873 the store was vacant, and he was refusing to pay rent. On May 6 of that year, another contract was signed whereby Connell was permitted to build a new feed and supply store between Guard Lock No. 2 and Lock No. 23. The lease was for six years at an annual rental of \$40.

Lock No. 23—On August 9, 1883, H. C. Ashly requested permission to build a store on the berm side of the canal at the lock, but there is no record of any action made relative to the request.

Lock No. 24—On January 7, 1873, E. M. Lowe was granted permission for the lease of land at the Seneca Lock for a feed store. Apparently, he moved a building from the Virginia side of the river and reconstructed it on the towpath side of the canal.

Edward's Ferry—On May 12, 1864, McVeirs and William Jones, Jr., were given permission to build a storehouse on the berm side of the canal near Edwards Ferry for the purpose of "vending food etc. to boatmen." The rent was to be \$24 per year.

Edward's Ferry—Apparently, another store was being operated at Edward's Ferry prior to May 15, 1865, because on that date, Flitchall and Williams were permitted to build a porch on their store for an annual rent of \$6.

Lock No. 25—On January 1, 1872, permission was granted to George W. Spates to lease a parcel of land on the berm side of Lock No. 25 (Frontage 25 feet and running back 36 feet) for the purpose of erecting a grocery and feed store. The lease was for ten years at \$36 per year. On April 30, 1874, Spates assigned his lease to George C. Fisher, and in the Spring of 1876 the canal board approved another transfer of the lease to E. E. Jarboe.

Conrad's Ferry—On December 17, 1863, Daniel L. White was given permission to build a storehouse on the berm side of the canal at Conrad's Ferry at an annual rent of \$12.

Lock No. 27—On June 15, 1866, M. Kindle was granted permission to build a grocery and feed store near the lock for an annual rent of \$36.

Lock No. 28—On July 7, 1864, Greenbury Foot was given permission to erect a small building near the lock at an annual rent of \$12.

Lock No. 29—On March 24, 1864, M. E. Alexander was given permission to build a storehouse on the berm side of the canal near the lock at a yearly rental of \$12. The purpose of the store was to sell feed and provisions to the boatmen. On May 15, 1865, Alexander requested and received permission to sell groceries at his store. The board authorized John H. Rench on December 10, 1869, to build a second feed store on the company ground at the lock for an annual rental fee of \$36.

Lock No. 30—On September 24, 1863, Mortimer Osborn was granted permission to put up a counter and shelves in a room at the lock house at Berlin for the purpose of selling dry goods and groceries. The privilege was to be for one year at an annual rental of \$150 of which \$100 was to be applied to his pay as lockkeeper.

Lock No. 33—On March 4, 1859, William Walsh requested permission to erect a feed store on a vacant piece of ground near the lock. Apparently, this store was later built above the flume of the lock.

Lock No. 37—Prior to December 1876, Joseph Lewis had operated a store on the berm side of the lock. In that month he requested that the lease be extended for five additional years. As his grocery business had been interfered with by the peddling and sale of produce on the towpath, he requested that his lease cover control of the towpath for marketing purposes.

Lock No. 39—On February 7, 1866, John J. Norman was granted permission to build a bakery and feed store at the lock for an annual rental fee of \$36.

Lock No. 41—Prior to May 1, 1877, Charles Dellinger operated a stone storehouse and adjoining frame hay shed fronting on the lock. On this date, the lease was transferred to Daniel, his son, as he had died recently.

Williamsport—On January 11, 1866, Shoop and Leferre were granted permission to build a storehouse at Williamsport for an annual rental of \$36. The following month on February 7 Franc Sharpless was given permission to build a store at Lock No. 44.

Lock No. 46—On August 10, 1865, F. W. Kindle was authorized to build a feed and grocery store. The lease was for ten years at an annual rent of \$36.

Lock No. 50—On August 10, 1865, William J. Hassett was granted permission to build a feed store. The lease was for ten years at an annual rent of \$36.

Lock No. 51—On March 8, 1866, Theophiles Barnett was permitted to construct a feed and grocery store at an annual rental fee of \$36.

Lock No. 52—On April 12, 1865, A. B. Tancy was granted permission to erect a store for “vending groceries and feed” at an annual rental fee of \$36.

Dam No. 6—On December 14, 1865, Adam Faith was permitted to build a feed store at an annual rental of \$36.

Oldtown—Apparently, John Wilson was granted permission to erect a feed store “on the eastern side of the bridge and the berm bank of the canal at Oldtown” after March 3, 1859.¹⁹¹

In addition to the feed stores that were built along the canal to cater to the boatmen, there were a number of grocery and feed store establishments in Georgetown and Cumberland whose business consisted primarily in meeting the needs of the “canallers.” By 1860, there were 17 flour and feed stores located near the canal in Georgetown, 13 of which were on Water Street and one each on Greene, Cherry, High, and Jefferson Streets. In that same year, there were 7 grocers, whose establishments were situated near the canal. Six of these were on Water Street and one on Market Street.¹⁹²

As the trade of the canal grew so did the number of businesses in Georgetown that catered to the needs of the boatmen. By 1872 the number of flour and feed stores in the vicinity of the waterway had been consolidated into 7 principal establishments for the trade of the boatmen:

E. M. Cropley & Co.,	184 Bridge Street
James H. Foster,	22 Bridge Street
William H. Gaskins,	5 High Street
J. Jackson and Bro.,	110 High Street
J. T. Lee & Co.,	Bridge near Greene
S. B. Lyddane,	140 High Street
D. F. Robinson,	78 Water Street

At the same time, the number of grocery stores near the line of the canal had increased to some 13:

¹⁹¹ *Ibid*, K, 90, 93, 327, 351, 361, 370, 373–374, 380, 385, 393, 406, 416, 421, 425–426, 441–442, 458–459, 464, 469, 475–476, 480, 498, L, 207, 248, 289, 382–383, 430, 445, M, 84, 88, 134, N, 141, 224; Garrett to President and Directors, March 9, 1870, Garrett to Clarke, May 9, 1872, McQuade to Board of Directors, Jan. 6, 1873, Maus to Gorman, May 16, 1873, Bickler to Gorman, July 30, 1874, Jarboe to President and Directors, April 23, 1876, Lewis to Gorman, Dec. 12, 1876, Dellingar to Gorman May 1, 1877, and Douglas to Gorman, May 1, 1877, Ltrs. Recd., C & O Co., and Montgomery County Circuit Court, 61, Land Record, Liber., E.B.P., 9, 367–368, 63, Land Record, Liber., E.B.P., 11, 44, and 94 Land Record, Liber., JA-6, 141.

¹⁹² *Boyd's Washington and Georgetown Directory* (Washington 1860), 189–92.

Henry Artz,	4 Market Street
A. H. Bradt,	Canal Street near Potomac Aqueduct
Buckley and Lyons,	30 Water Street
George M. Godey,	High and Beall
James Hartigan,	42 Water Street
John S. Hill,	83 Greene Street
Lewis and Leetch,	13 Water Street
E. T. Lyddane,	64 Market Street
M. McNally,	48 Water Street
Daniel O'Leary,	128 Water Street
B. F. Riley,	115 High Street
John H. Sis,	79 High Street
Somers & Smith	97 Water Street ¹⁹³

In the latter years of the operation of the canal as an independent entity, the number of the businesses in Georgetown catering to the boatmen declined along with the commerce on the waterway. Among the most important grocers to the "canallers" during this period were:

S. Cropley's Sons	Bridge Street and Market Space
A. H. Bradt,	On the Canal near the Coal Elevators
William A. Offutt and Brother,	Bridge and High
E. T. Lyddane,	115 High Street
John Lyddane	High and First

During this latter period the principal businesses near the canal that supplied the boatmen with feed were:

George W. Darby,	221 Bridge Street
Darby & Johnson,	Bridge and Montgomery
John Dugan & Bros.,	Bridge and Market
David B. Jackson,	110 High Street
William H. Lee,	48 Bridge Street
Edward Lyddane	81 Water Street
Thomas Woodward,	35 Jefferson Street ¹⁹⁴

During the 1870s and 1880s, there were a number of business establishments near the Cumberland basin where the boatmen purchased most of their groceries, provisions, and feed. Groceries and staples were generally purchased at:

Thomas Connell,	122 Wineow Street
William T. Coulehan,	40 Wineow Street
Arthur Dawson,	64 Wineow Street
T. Morris,	116 Wineow Street
William Murphy,	176 Wineow Street
John McGinnis,	123 Wineow Street

¹⁹³ *Boyd's Business Directory of the Cities of Alexandria, Georgetown, and Washington* (Washington, 1872), 50-52.

¹⁹⁴ T. H. S. Boyd, *The History of Montgomery County, Maryland* (Clarksburg, 1879), 145-57 and *Boyd's Directory of the District of Columbia* (Washington, D.C., 1880), 57-58.

Feed and hay were usually procured at:

John J. Humbird,	41 North Center Street
Smouse & Wilson,	77 North Center Street
John W. Willison,	7 Glenn Street
William T. Coulehan,	40 Wineow Street ¹⁹⁵

H. HAILING PLACE OF BOATMEN

The hailing place of the boatmen refers to the locality in which they maintained a residence. The "canallers" wintered at their homes, but sometimes wives and children lived there year-around. According to the canal company register of 1851, in which the homes of all the boatmen were listed for the first time, the majority of the "canallers" lived in Cumberland, Georgetown, Williamsport, Alexandria, and New York. The statistical breakdown for the 223 boatmen that registered their vessels that year is as follows:

Alexandria	14
Antietam	6
Baltimore	1
Barry	1
Bay State	1
Berlin	3
Big Pool	1
Boston	4
Brooklyn	1
Catoctin	1
Cedar Grove	1
Cedar Point	1
Chaney's Neck	2
Conrad's Ferry	1
Cumberland	41
Dam No. 3	2
Dam No. 4	3
Edwards Ferry	4
Falling Waters	1
Georgetown	30
Glenily	1
Goose Creek	3
Hancock	8
Harpers Ferry	5
High Rocks	1
Hock Hill	1
Honey Wood	1
Horse Pen	1
Jefferson County	2

¹⁹⁵ *Cumberland City Directory, Local Guide, and Business Mirror* (Cumberland, 1873), 32, 57; *Directory of Cumberland and Allegany County* (Cumberland, 1890) 176–177; and *Baltimore Evening Sun*, August 10, 1937.

Knoxville	3
Leesburg	2
Maryland	1
Mercerville	5
Miller's Basin	2
Millstone Point	1
Monocacy	2
Mount View	1
New York	14
Noland's Ferry	2
North Bend	2
Point of Rocks	1
Potomac Mills	1
Quarter Branch	1
Rochester	1
Seneca	2
Sharpsburg	1
Sharpsburg Landing	1
Shepherdstown	7
Spring Mill	3
Springland	1
Washington	8
Weverton	2
Williamsport	17 ¹⁹⁶

The years 1873–74 are the last for which there are available company records listing the hailing places of the boatmen. By this time there were 539 "canallers" operating vessels on the waterway.

Trade on the canal had nearly reached its zenith by this time for the nationwide depression hit the waterway in 1876, and the commerce never again reached the totals of the early 1870s. In 1873–74 the majority of the boatmen lived in Cumberland, Williamsport, Sharpsburg, Maryland, New York, Bakersville and Hancock. A statistical breakdown of the hailing places of the boatmen in those years was as follows:

Cumberland	162	Knoxville	3
Williamsport	49	Antietam	3
Sharpsburg	49	White's Ferry	3
New York	36	Sandy Hook	2
Maryland	27	Berlin	2
Bakersville	26	Point of Rocks	2
Hancock	26	Frederick County	2
Washington County	19	Monocacy	2
Shepherdstown	13	Edward's Ferry	1
Clear Spring	10	Dam No. 4	1
Seneca	10	Hall Town, Va.	1
Georgetown	9	Dam No. 5	1
Four Locks	9	Fair View, Md	1
Alexandria	8	Gainesville, Va.	1

¹⁹⁶ Record of Boat Registrations, 1851–1874, C&O Co.

Harpers Ferry	8	Boonsboro	1
Millstone Point	7	Allegany County	1
McCoy's Ferry	6	Oldtown	1
Cherry Run	5	Jefferson County	1
Weverton	5	Pennsylvania	1
Washington	5	Unknown or living on boats	20 ¹⁹⁷

I. RACIAL DISCRIMINATION AGAINST BLACK BOAT MASTERS

Although blacks had served as deck hands on canal boats since the canal had been opened to navigation, the issue of blacks as boat captains did not arise until 1856. Apparently, several blacks either attempted to purchase boats or were hired by the owners of large fleets of vessels to be captains of several barges in that year. Upon the complaint of some white boatmen and local residents along the waterway, the directors requested the legal opinion of the company counsel, W. S. Cox as to the "competency of the Board to limit or prohibit the employment of free Negroes or slaves upon the canal as masters of boats." In his report on November 7, Cox responded that according to his understanding of Maryland statute law there were no applicable acts relative to the question of blacks as masters of boats. Accordingly, the board approved a measure on December 10 requiring that all boats navigating the canal after January 1, 1857, have "at least one white person above the age of 18 years, who shall act as master."¹⁹⁸

Although a formal declaration by the board abrogating the racial ban against black barge masters could not be found, there was some relaxation of the policy in the post-Civil War Era. Undoubtedly, the change was a direct result of the outcome of the national conflict and the subsequent adoption of the thirteenth and fourteenth amendments to the Constitution. However, it is interesting to note that no blacks were enrolled as barge captains on the company boat registers until January 1878, 1st. In that year, four blacks were listed in that category as follows:

CAPTAIN	BOAT NAME	BOAT OWNER	EMPLOYER
Louis Roberson	Viola H. Weir	John T. Dixon	New Central Coal
Wilson Middleton	Dr. F. N. Davis	T. H. Davis	New Central Coal
Kirk Fields	John W. Carder	Frank Darkey	Hampshire Coal
J. M. Johnson	John Sammon	Michael Ougley	Maryland Coal ¹⁹⁹

J. RELIGION ON THE TOWPATH

Although there probably were a number of mission efforts directed toward the canal boatmen by various religious societies and institutions along the canal, three such endeavors are deserving of note. They are the establishment of Grace Episcopal Church in Georgetown in 1855, the holding of Sunday School services in Cumberland in the 1880s, and the opening of the Mission on the Towpath just above the Potomac Aqueduct in 1894.

1. Grace Episcopal Church

¹⁹⁷ *Ibid.*

¹⁹⁸ *Proceedings of the President and Board of Directors I*, 303, 319. It is interesting to note that this issue arose on the canal about the same time that the controversial and much heralded Dred Scott Case was before the United States Supreme Court.

¹⁹⁹ Register of Boats Employed on the Canal, January 1, 1878, C & O Co.

In 1855 three members of the vestry of St. John's Episcopal in Georgetown, Messrs. Thomas, Rittenhouse, and Ridgely, became interested in starting a mission for the numerous sailors and canal boatmen who frequented the Georgetown waterfront. Through their efforts and at their personal expense, a small frame church was built on what is now Wisconsin Avenue below M Street. Rev Henderson Suter, later the rector of Christ Church at Alexandria, established a Sunday School in connection with the mission, and regular services were held there with the assistance of several students from the Virginia Theological Seminary at Alexandria. One of the students, who was the son of the former rector at St. John's, was largely responsible for the growth of the congregation. Henry D. Cooke, a one-time vestryman at St. John's and a wealthy member of the banking firm of Jay Cooke & Company, soon became interested in the work of the mission. In 1865 he bought two lots on Brickyard Hill (presently 1041 Wisconsin Avenue) and made possible the construction and furnishing of the present church edifice with a personal donation of \$25,000. For some years all of the operating expenses of the mission were borne by St. John's. Later the work was taken over by Christ Church, Georgetown, and eventually Grace Episcopal Church became an independent parish.²⁰⁰

2. American Sunday School Union

In the late 1880s, the canal company granted a permit to the American Sunday School Union to hold Sabbath classes on an abandoned boat near Cumberland. The classes were taught by a local woman, and both adults and children were welcome. Attendance averaged about 35 per week. It is likely that similar classes were held in many of the towns along the canal for the benefit of the "canallers."²⁰¹

3. Mission on the Towpath

The Mission On The Towpath was established in 1874 by Mrs. S. E. Safford for canal men and their families about $\frac{1}{4}$ mile above the Potomac Aqueduct. The mission was located in a low, one-story brick building "almost under the eaves of the Independent Ice Company" that had served originally as the office of the Foxhall Foundry. Here the boatmen's children were taught to read and write, and the adults were instructed in industrial arts and assisted in locating temporary housing in winter when the canal was closed to navigation. Sometime after 1905 the mission was moved to another building on the old Foxhall Foundry site. In December 1913, the mission was closed, due in part to the reduced number of boats operating on the waterway.²⁰²

K. CANAL SONGS

Although most of the boatmen's songs were never written down or collected, the words of several tunes appeared in an article in the *Baltimore Evening Sun* of August 13, 1937. In the article Lee McCardell, the writer, interviewed a number of former boatmen, canal employees, and valley inhabitants during the sesquicentennial celebration at Cumberland.

²⁰⁰ *One Hundred and Fifty years in the Life of St. John's Church, Georgetown* (Washington, D.C., 1946), 143; Mary Mitchell, *Divided Town* (Barre, 1968), 139; *Washington Evening Star*, October 14, 1870; and Rose Trexler Mitchell, comp., *Parish Register of Grace Protestant Episcopal Church, Georgetown, D.C., 1863-1900* 1963, iv-v.

²⁰¹ Misc. MSS., C & O Co.

²⁰² *Washington Evening Star*, July 11, 1905, and Thomas F. Hahn, *Towpath Guide to the Chesapeake & Ohio Canal*, Section One (Rev. ed., York 1974), 18.

One of the songs noted in the article was a three-verse ditty that Sam Graham, the captain of the *Rufus Stride*, had composed on his numerous journeys along the waterway. The last two lines of each verse were dedicated to his mule team, which usually had been driven by one of his three sons—Jake, Ben, or Charlie the words of the song were as follows:

Comin' down the Big Pool,
Water mighty wide,
Pitch out your Quarter
To see the cat fly;
Captain, Captain,
A quarter mighty small,
Pitch out your pocketbook
Manifest an'all!
An' a ram-jam now,
Git alon, Old Bones!

I come down to Williamsport,
Seven o'clock at night,
And the first word I heerd
Was a 'what boat's that?'
A left foot an' lousy
Just gettin' fat . . .
(Editor's Note-Censored!
We can't print that)
An' a ram-jam now,
Git along, Old Bones!

I come down the Log Wall
An' give a mighty yell.
The hames ketched a fire
an' the driver ketched hell.
The captain played the fiddle
An' the steersman played the flute.
An' the cook poured coffee
In the Old Man's boot!
An' a ram-jam now
Git alon, Old Bones!

One of the most popular songs among the boatmen was the jingle "Johnny Howard," a ballad about a young canal hand who was hung on St. Patrick's Day for the brutal murder of his boat captain at the Oldtown Cut. The words of this doleful tune, of which only a few were still in the memory of the boatmen that McCardell interviewed, were as follows:

Johnny Howard

His name was Johnny Howard
And a nice young man was he,
he boated on the water
For many a night and day . . .

(One night at the Oldtown Cut the captain
came on deck with a hatchet in his hand and announced)
Johnny, before I take water,
One of us must die . . .

(Whereupon Johnny picked up a spreader stick and
laid the captain low. He was scared but a black hand
driving the mules reassured him:)

The Negro said, Johnny, You
need not run away,
For I will swear it self-defense
Upon that fatal day.

One other song is mentioned in the article by McCardell. The ballad had four verses but the words to only one stanza were given:

I've waded through many a valley
I've traveled the tall mountain hill,
But there's nothing my spirit can rally
Like the breadth of old Sideling Hill.²⁰³

L. STORIES AND REMINISCENCES OF CANAL DAYS

There are a number of sources of colorful stories about life along the canal during its operating period as well as reminiscences about canal days by former canal employees and boatmen. Among the most interesting and entertaining sources are:

1. There are a series of taped conversations with 14 former boatmen and canal employees on file at the Harpers Ferry Training Center and at the Chesapeake & Ohio Canal National Historical Park Headquarters.
2. The only recorded manuscript of a journey on the waterway during the canal's operating period was written by an anonymous unemployed New England man who served on the crew of a barge on a round-trip voyage from Cumberland to Alexandria and return in 1859. About thirty years later, he wrote his memories of the voyage. The anonymous manuscript reached the City Library Association of Springfield, Massachusetts, at an unknown date, and in 1923, it was given to the Library of Congress. The manuscript was first edited by Ella E. Clark and published in the *Maryland Historic Magazine*, in June 1960, and in 1975 it was reprinted as a booklet under the title *Life on the Chesapeake & Ohio Canal 1859* edited by Ella E. Clark and Thomas F. Hahn.
3. A number of colorful stories about the persons associated with the canal as well as its operation are found in George Hooper Wolfe, who worked as a hand on a boat crew in his youth during the waning years of the canal's operation, relates some of the most interesting occurrences, tales, and legends that are associated with life along the canal.

²⁰³ *Baltimore Evening Sun*, August 13, 1937.

4. Sprinkled throughout the *Towpath Guide to the Chesapeake & Ohio Canal* by Thomas F. Hahn are numerous stories of fiction and fact concerning life along the canal during its operating period.
5. In the *Baltimore Evening Sun* of August 10–12, 1937, there are two extensive interviews with Captain Charlie (Scott) Eaton of Cumberland and Captain Denton (Dent) Shupp of Williamsport. Both of these interviews by Lee McCardell consist of rambling reminiscences concerning the boatmen's and lock keeper's lives along the waterway.

APPENDIX A

CA. OCT. 1828

SPECIFICATION OF A LOCK KEEPERS HOUSE

MASONRY—The building to be of stone and to be 30 x 18 feet over the walls, with a cellar under the kitchen part 6 feet in the clear, with a floor of earth, the walls to be 22 inches thick, and have a projection on the outside of 6 inches all round, and at least one course of stone high the cellar door to have stone steps, and a locust frame with grooves to receive the doors, which are to have substantial strap hinges and be fastened in the usual way with a padlock; there will be a window on each side consisting of a single sash each of 10 x 12 glass & 3 lights in width, each to shut in an oaken frame, the sash, to have hinges, to open upwards.

PRINCIPAL STORY—The floor to be 2 feet above the surface of ground; the walls to be 20 inches thick, and that part not over the cellar to have a footing of stone all around of 6 inches more, one course of stone high, the space between the ground and the bottom of floor to have 3 slits in each side, 9 x 4 inches, to be covered with perforated iron or copper plates, to exclude vermin, and admit air, under the end where there is no cellar: the height in the clear of the story to be 8 feet between floor & ceiling.

ATTIC STORY—The walls to be 18 inches thick and three feet high from the top of floor to the square: The peak of the roof to be 6 feet above side walls: The stone to be laid in clay mortar excepting 3 inches on the outside of the walls above ground and the inside of the cellar which 3 inches is to be good lime mortar and well pointed.

CHIMNEY STALK—To be begun as near the surface of the ground as a good foundation can be obtained, one side to be supported by the cross wall of cellar, the foundation to be of stone 8 x 4 feet to top of arch of oven where it will be 6 x 4 feet the stalk may be of brick or stone; if built of stone, the openings of the fireplaces, the insides of the flues, & the oven should be of brick; and the top above the roof should be hammered; or built of hard bricks, and good mortar: the kitchen flue to be 18 x 12 and that of the parlor 12 x 12 inches after they are plastered. The outside doors to have stone sills, and stone steps; the window sills should be of stone, or locust painted and sanded. All the lintels of the doors & windows are to be of stone.

CARPENTER WORK—Joists of first floor to be 3 x 9 inches: of 2d floor 3 x 8 inches. Floors, to be of 1 1/4 heart pine planed and tongued and grooved. Doors to be of 1 1/4 heart pine not to exceed 6 inches in width to be battened and fastened with wrought nails the outside doors, to have jamb casings of 2 inch heart pine, let into the sills and framed at the top the outside doors to have substantial strap hinges put on with screws, the front door to have a good stock lock, and the kitchen door an inside bolt, the parlor door to be furnished with a good 7 inch nob lock, all the rest of the doors to have thumb latches.

Windows Those in the principal story to have 10 x 12 glass, those in the upper story to have 8 x 10 glass: The casings to be 1 1/4 inch yellow pine plank.

A sash of 10 x 12 glass is to be put over the front door to light the entry.

ROOF—To have 10 pairs of rafters, 4 inches deep at top and 6 inches at lower end and three inches thick to be framed together at top and be secured by a brace at a point on the rafter that will afford a clear head way of 6 feet 4 inches in the attic story; the horizontal slope of foot of rafters to project 6 inches over the face of the wall & to have a plansier or casing, spiked to them, to extend to face of wall, the shingles to project 4 inches over that, making in all 10 inches of projection; the lower ends of rafters to be notched into a wall plate, and spiked to it; said wall plate to be 4 inches thick, and spiked to pieces of 3 x 4 scantling; built angling into top of wall, a rafter of 1 ½ inch plank to be built in the center of gables to project like the others: Sheeting, to be 3/4 boards, laid close, the shingles to be cypress, of good quality 18 inches long, & to show 5 ½ inches to the weather & not less than 4 inches wide [here a word is missing due to torn ms., but it is probably] and 5/8 thick.

CARPENTER WORK OF INSIDE—The inside doors to have plain jamb casings; the washboards and surface to be plain, only single beaded; the mantle pieces to have plain pilasters, and moldings to support the shelf: The spaces to the right & left of front entry to have stud partitions, the space between chimney stalk & back wall to have a two inch plank partition, the space between the fireplace and door of stairway to be stud partition the stair to be plain with a nosing. The partition separating the rooms in attic story, to be 1 ½ inch plank: The small closet to be finished in a plain manner.

PLASTERING—The ceilings, and stud partitions, to be lathed and those, as well as the walls to be finished with three coats of good lime mortar, made with glue and proper proportions of good clean sand.

APPENDIX B

CA. OCT. 1828

ESTIMATE OF THE EXPENSE OF A LOCKKEEPERS HOUSE

Stone and Brick

60	Cubic yards digging in foundation	@ \$.20 per yd.	12.00
124	Perches stone laid in clay, 3 inches in lime mortar	@ \$ 2.50 per p.	310.00
4000	Bricks of good quality laid in lime mortar	@ \$ 10.00 per m.	40.00
60	Running feet blue stone in steps, lintels & sills	@ \$.25 per ft.	15.00

Lumber

3250	Feet common white pine plank	@ \$.50 per 100 ft.	48.75
1822	Feet 4/5 hart pine	@ \$ 2.75 per m.	50.18
4000	Shingles	@ \$ 10.00 per m.	40.00
150	Pounds of nails	@ \$.08	12.00

Hardware

Workmanship

8	Squares flooring including laying joists roof	A 4.00 per s.	32.00
	Roof		32.56
6	Doors at 3.75 = \$22.50 + 2 mantle pieces at \$8		30.50
330	Feet washboard & surface a 4¢ = \$13.20 + stair at \$11		24.20
150	Feet partitions at 5¢ = \$7.50 + Closet at \$6.00		13.50
7	Windows = \$42 + cellar door and frames at \$7.50		49.50
	Plastering on walls	A 22¢ per yd.	32.50
	Plastering on laths	A 30¢ per yd.	34.80
	Painting		30.00
	Crane for fireplace		<u>3.50</u>
			\$828.46

Drawings and other Records Concerning Construction, C & O Co.

APPENDIX C

FEBRUARY 10, 1836

SPECIFICATION FOR A LOCK-KEEPERS HOUSE (30 BY 18 FEET)
TO BE ERECTED ON THE LINE OF THE CHESAPEAKE & OHIO CANAL.

MASONRY—The building to be of brick or stone, at the option of the contractor.

CELLAR—There will be a cellar under the whole house, six feet in the clear, with a floor of earth. The cellar walls will be of stone, 22 inches thick, and shall project 2 inches outside of and around the building. The foundation course of these cellar walls shall project 6 inches outside of the 22 inches. The level of the foundation walls shall be at least one foot below the cellar floor. The cellar door shall have some steps, and a locust frame, with substantial strap hinges, and fastened in the usual way with a padlock. There will be two windows in the cellar, one on each side of the house, consisting each of a single six light sash of 8 by 10 glass, shutting in a locust frame, the sash having hinges to open upwards. From the cellar there shall be a good and sufficient drain, protected by an iron grate.

CHIMNEY—The chimney shall be in the middle of the building; its foundation shall be on level with the cellar walls, and may be either brick or stone; no wood shall be used to support the chimney, unless at such distance below the hearths, as shall, in the opinion of the Engineer, be safe from fire. Above the floor of the principal story the chimney shall be of brick.

PRINCIPAL STORY—The principal story will be eight feet in the clear between the floor and ceiling, and its walls will be 14 $\frac{1}{4}$ inches if of brick and 20 inches if of stone. The walls of the attic story, lengthwise of the building, will be the same thickness as the principal story. The end walls of the attic will only be 9 inches if of brick and 12 inches if of stone. From the top of the chamber floor to the square will be 3 $\frac{1}{2}$ feet. The peak of the roof will be six feet above the side walls. In the clear, between the floor and ceiling of the attic, will be six feet three inches.

ROOMS—There will be two rooms in each story. The washboards and surface will be plain. To each of the two lower rooms, there shall be an outer door; there shall also be a door leading from one to the other of these rooms. There shall be a door for the stairs leading from one story to the other; and also between the two upper rooms.

DOORS—The doors (five in number, exclusive of the cellar door) shall all be plain paneled, each having a Pennsylvania or German lock, with iron handles. The outside doors will have locust sills and locust lintels; they will have jamb casings of two inch heart pine let into the sills, and framed at top; they shall also have substantial strap hinges, put on with screws.

WINDOWS—In the lower story there will be five windows of twelve lights, 10 by 12. In the upper story there will be four windows of nine lights each, 10 by 12, glass. The casings will be of 1 $\frac{1}{4}$ inch yellow pine plank. The sills and lintels will be of locust.

PLASTERING—The whole interior of the building above the cellar shall be plastered, except the partition separating the two rooms in the attic story, which will be of 1 $\frac{1}{2}$ inch plank. The plaster shall be finished in the most durable manner, with two coats.

STAIRS AND CLOSETS—The stairs will be plain, and of such rise, and tread, and width, as the Engineer may direct. The closets, two in number, one in each of the lower two rooms, will be finished in a plain manner, with battened doors.

FIREPLACES—There will be two fireplaces, one in each of the lower rooms; each having a mantelpiece, with two pilasters; an iron crane shall be put in the kitchen fireplace.

JOISTS—The joists of the first floor shall be three by twelve inches; of the second, three by ten inches; sixteen inches apart, from center to center, of good yellow pine.

FLOORS—The floors are to be 1 $\frac{1}{4}$ inch heart pine, planed, and tongued and grooved.

ROOF—The roof will have sixteen pairs of rafters, five inches deep at the top, and eight inches deep at the lower end, and three inches thick, framed together at top, and secured by a collar seam at the point that shall give the required height of six feet three inches in the clear in the upper story. The method of securing the foot of the rafters shall be in the most substantial manner, by means of wad plates properly connected with the top of the brick work, of not less than four inches in thickness and nine inches in width. The projection over the wall, and the finish at the foot of the rafters, shall be such as to present a workmanship appearance. The sheathings will be of three-fourth inch board, laid close; the shingles of the best quality of cypress, eighteen inches long, showing 5 $\frac{1}{2}$ inches to weather, and not less than four inches wide and five-eighths thick.

PAINTING—All of the woodwork outside shall have three coats, and the inside two coats of the best English white lead oil paint, well put on.

MATERIALS &C.—The quality of the brick and of the stone work of the whole building shall be such as the Engineer shall approve of; and the bond, also, of the brick and stone work shall be such as he shall direct.

The whole of the masonry, from the foundation up, shall be laid in good and approved lime mortar, except 1 $\frac{1}{2}$ feet in height at the top of the stone masonry, which shall be laid in mortar made of the best water cement.

PLAN—A plan shall be furnished by the Engineer to the contractor, showing the exact position of doors, windows, closets, etc.

APPENDIX D

COPY OF A REGISTER OF FINES COLLECTED
ON THE CANAL BETWEEN 1877-1880

DATE	BOAT	CAPTAIN	OFFENCE	FINE
May 30, 1877	Ed Bayer & H. C. Clamo- han	Thomas Fisher	Passing through lock without waybill	\$10.00
Oct. 22, 1877	R. Cropley's scow		Knock out gate in Lock No. 5	\$25.00
Nov. 12, 1877	Five Bros.	Joseph Little	Run into crib at Lock No. 9	\$10.00
Jun 3, 1878	Ludlow Pat- ton		Shutting off fire while filling level and locking through without permission	\$10.00
Jul 4, 1878	John Sherman		Unloading and raising	\$62.70
Aug 30, 1878	Steamer Scrivenes		Allowing the Bertha M. Young in tow to sink on Level 36 and abandoning her at night without giving notice, causing navigation to be suspended 36 hrs.	\$50.00
May 5, 1879	W. J. Booth	Jacob Hooker	Running into and breaking gate at Lock No. 40	\$40.00
Jan 14, 1880	Harry & Ralph		Running into gate at Darbey's Lock	\$5.00
Jan 17, 1880	P. Heim	Mertens	Running into gate at Lock No. 61	\$10.00
Jun 1880	Walter Thompson		Running into and breaking gate at Lock No. 75	\$25.00
Apr 24, 1880	Five Bros.	Joseph Little	¾ day pumping by Jacob Sheets and by Adam Keefer	\$1.50
Apr 25, 1880	Five Bros.	Joseph Little	Pumping boat 2 days – 2 men @ \$2 per day	\$4.00
Apr 29, 1880	Adam Sherman	Capt. Bowers	Pumping boat 1 hand, 1½ day @ \$1 per day	\$1.50
May 14, 1880	Laura P. Agnew	Capt. Hedely	Services 1 hand, 2 days @ \$1 per day	\$2.00
May 27, 1880	G. W. Kscdr	Poffenberger	Pumping	\$5.50
May 28, 1880	G. W. Kscdr	Poffenberger	Pumping	\$5.50
May 29, 1880	G. W. Kscdr	Poffenberger	Pumping	\$4.40
June 12, 1880	G. L. Booth		Pumping	\$4.40
June 18, 1880	Mollie		Pumping 2½ days @ \$1.10 per day	\$2.75
June 19, 1880	City of Ham- burg		Pumping 2 men ½ day each	\$1.10

June 19, 1880	City of Ham- burg		Pumping 4 men ½ day each	\$2.20
June 26, 1880	A. J. McAllister		Pumping 2½ days @ \$1.10	\$2.75
June 27, 1880	Annie & Lizzie		Pumping 1½ days @ \$1.10	\$1.65
June 28, 1880	Annie & Lizzie		Pumping 2 hands	\$2.20
July 14, 1880	G. T. Gertell		Pumping and bailing	\$6.40
Aug 16, 1880	F. Gorman		Pumping	\$1.10
Aug 19, 1880	Hatton & Bessin	Capt. Shar- man	Pumping	\$3.30
Aug 22, 1880	Ernst & Hol- land		Tying up on towpath	\$5.00
Aug 28, 1880	Harris McDonald		Pumping	\$2.20
Aug 30, 1880	U. S. Bracher		Pumping	\$4.40
Sept 2, 1880	G. M. Ryan		Hoisting water and slamming gate	\$5.00
Sept 2, 1880	Stonebreaker		Hoisting water and slamming gate	\$5.00
Oct 24, 1880	Joseph Clark		Laying on towpath	\$5.00
Oct 24, 1880	O. of Sheri- dan Line		Running into gate at Darbey's Lock	\$5.00
Nov 2, 1880	W. H. Lowe		Laying on towpath	\$5.00
Nov 2, 1880	Denton Prather		Laying on towpath	\$5.00

