

**THE ALEXANDRIA CANAL:
TIDEWATER TERMINUS OF THE
CHESAPEAKE AND OHIO CANAL SYSTEM**

by

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Foreword

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We are pleased to offer the papers within this series and in so doing are opening our “manuscripts on file” - including professional conference papers, background documentary studies, student course papers, and volunteer research papers - to professionals and public alike.

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Abstract

During the 18th-century, Washington, Jefferson, and other leaders dreamed of uniting the waters of the Ohio and the Potomac Rivers to facilitate trade and travel west. This dream was partially realized in the 19th-century with the construction of the Chesapeake and Ohio Canal system. By 1850 the canal system extended from Cumberland, Maryland, to Alexandria, Virginia. In 1979 Alexandria Archaeology rediscovered Lift Lock and Pool No. 1 of the Alexandria Canal and nominated them to the National Register of Historic Places. The National Trust for Historic Preservation sponsored further phases of the Alexandria Canal Project in 1982. Lock and Pool No. 1 were subsequently restored by a private developer who also provided space on the site for a maritime museum.

Alexandria, Virginia, lies about six miles south of Washington, D.C. on the west bank of the Potomac River. As a young surveyor George Washington helped lay out the town in 1749. During the next fifty years it became one of the nation's greatest seaports (Macoll 1977:xiii). It ranked only fourth in the country in the export of such important commodities as tobacco and flour (Sharrer 1977:18-19). Imports included mostly consumer goods such as groceries, housewares, and clothing (Ibid.:21). Alexandria's success was due in part to several advantages in transportation. A convenient system of roads and turnpikes made the town the preferred overland destination for produce coming in from the western country. The town's greatest asset, however, was its location near the head of the navigable portion of the Potomac where ocean going ships could dock at her wharves. Alexandria was further down the river than Georgetown or Washington City. Nevertheless, many rivermen chose the relatively safer passage along the right bank where the Virginia shore provided protection from the prevailing winds (Franklin 1986:290).

Over the years there had been many suggestions for the improvement of navigation on the Potomac as a link to the west. Writing as early as 1780, Thomas Jefferson recognized the advantage of this connection to Alexandria. He dreamed of uniting the waters of the Potomac with those of the Ohio, which he called "the most beautiful river on earth (Jefferson 1955:10)." The portage then was only 15 to 40 miles...

For the trade of the Ohio, or that which shall come into it from its own waters or the Mississippi, it is nearer though the Potomac to Alexandria than to New York by 580 miles and it is interrupted by one portage only.... (Jefferson 1955:16).

No less a figure than Washington himself realized how close were the headwaters of the Ohio and Potomac. As early as the 1750s he had been making expeditions to the Ohio Valley and began to develop plans for skirting the "fixed obstructions" in the river. Finally, in 1784, the Potomac Canal Company was formed with Washington as president. The company cleared many channels, built canals around falls and rapids but was ultimately unsuccessful because of the unpredictability of natural water levels in the river. The solution to this problem would be solved

some forty years later by other investors on another river. When the Erie Canal was completed in 1825, it demonstrated the value of a continuous, controllable waterway in contrast to a river with a few skirting canals (Franklin 1986:290.)

The opening of the Erie Canal, and other economic factors, led to the decline of Alexandria as an important port (Sharrer 1977:17-20). But the Erie's success also spurred new interest in a Potomac Canal. After much political maneuvering the US Congress chartered the Chesapeake and Ohio Canal to run "from tidewater on the River Potomac in the District of Columbia" to Cumberland in western Maryland and then over the Alleghenies to "navigable waters on the river Ohio" - which meant in fact the Monongahela River near Pittsburgh (Franklin 1986:289). The main canal was to end at Georgetown but Alexandrians were placated by a recommendation that an aqueduct across the Potomac would link the C&O to Alexandria harbor (Franklin 1986:299). Construction began in 1828. Businessmen of the City of Baltimore, much chagrined by the fact that the canal would not be extended to their community, decided to take a chance on a then untried new technology called a rail road. By 1831 a successful locomotive was on the tracks (Franklin 1986:297).

In 1830 the Alexandria Canal Company was chartered but funds were not made available until 1832. A huge aqueduct was constructed across the Potomac River to the Virginia shore and a seven mile canal carried canal boats to the deep water at Alexandria.

Lift Lock and Pool No.1 were part of a system of four locks at Alexandria's northern city limits which lifted canal boats 38 feet from the level of the Potomac River to that of the Canal. Lock No. 1 was the one from which barges entered and left the river. A boat entered the lock from either end, passing the open gates, at one end of the lock. The barge probably was poled or towed by hand into the lock, since no evidence of a tow path was revealed from the excavation. Each gate was then swung closed with a long beam attached to the top of the gate and serving as a handle. With both sets of gates closed, the lock containing the barge was now ready for its water level to be adjusted. The water was raised or lowered by opening the wicket gates at the bottom of the gates at one end of the lock to let water in or out. When the lock's water level was equal to water in the direction of travel the lock gates were opened. and the barge proceeded (Historic Alexandria n.d.:6).

When the Alexandria canal was finally finished in 1844 it quickly became the preferred outlet for the C&O canal due to its deep water harbor (Franklin 1986:300). In 1850 the system was completed to Cumberland, Maryland. Coal from the Appalachian mines became one of the most important commodities shipped to the Alexandria wharves. Other western products arriving in Alexandria included wheat, corn, whiskey, corn meal, and flour. Products shipped from Alexandria by canal included fish, salt, plaster, and lumber (Historic Alexandria n.d.:1-5).

During the Civil War the canal was temporarily put out of business when water was drained from the aqueduct to create a two-way wagon bridge. In this way troops and supplies could pass into occupied northern Virginia. After the war, traffic resumed on the canal. In 1886 a break in the aqueduct due to flooding occurred about the time the canal had reached the lowest level of profitability. The superstructure of the aqueduct was removed and an iron truss bridge for wheeled vehicles was constructed on the old stone piers (Hahn n.d.:5-6). The canal itself together with the locks and pools were gradually filled in and disappeared.

Competition from railroads and steamships had contributed to the demise of the Alexandria Canal as well as other mule-canal in the United States (Hahn n.d.:5-6). The operations of the C&O Canal itself ended in 1924 when it too was destroyed by a flood (Kytle 1983:119).

When Alexandria Archaeology rediscovered canal remains in 1979 after over 50 years of concealment, they were in an excellent state of preservation. Lift Lock and Pool No. 1 were listed in the National Register. Three years later the National Trust's Maritime Preservation Program funded major excavations of the site. The Alexandria Canal Project aimed to uncover the entire lock and pool and assess the practicality of their restoration (Historic Alexandria n.d.: 5).

On a blustery March afternoon the archaeology team, planners, and City crew assembled with shovels rubber boots, and backhoe to begin unearthing more of the lock's eastern end. The first cut made by the backhoe through water-soaked soil exposed perfectly preserved coping stones. Following the stones in a westerly direction, the Lock's entire length (90 feet) and width (16 feet, 8 inches) were outlined (Historic Alexandria n.d.:5).

The lock walls constructed of stone quarried in Washington D.C. were 15.5 feet deep. The floor, lined with wood planking, and several parts of the lock gate were well preserved. Two iron wicket gates that fit within the lock gate and regulated the water flow were also discovered. The fill material contained a large amount of glass from the Old Dominion Glass factory, which had occupied the site after the canal's demise (ca, 1898-1927). Contours of Pool No. 1 were also located by following the stones (Historic Alexandria n.d.:6).

Ownership of the property occupied by the canal had been disputed between private claimants and the United States Government since the early 1970s. As part of the court-approved settlement for this portion of the Alexandria waterfront, restoration of Lift Lock No. 1 and part of the adjacent pool was required. In 1988 the restored lock and pool were dedicated together with the Alexandria Maritime Museum, located in the new commercial structure that had been built on the site.

The Chesapeake and Ohio and the Alexandria Canals played an important role in the economy of the region for several decades of the 19th and twentieth centuries. Rediscovery and restoration of a portion of the tidewater terminus of this great system has contributed to our understanding of a significant area of past American enterprise and culture.

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