

# ON THE LEVEL

STORY  
EDITION



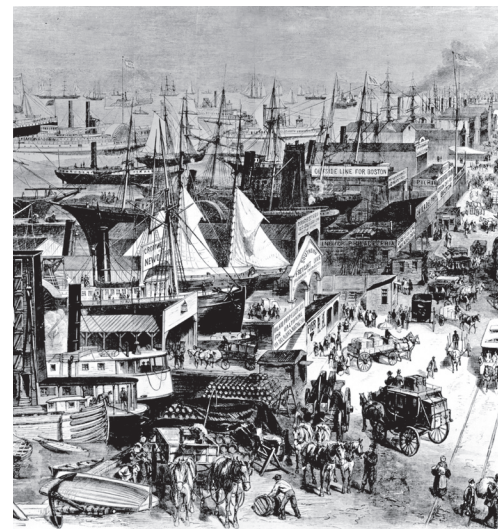
THE CANAL SOCIETY OF NEW JERSEY

## IRON AND STEAM on the Delaware & Raritan Canal

*In 1830 both the Delaware & Raritan Canal, promoted by Robert Stockton of Princeton, and the Camden & Amboy Railroad, promoted by the Stevens family of Hoboken, received charters on the same day to build along the same route across the waist of New Jersey. Rather than compete, they formed the Joint Companies and agreed to share both risks and profits. When existing shipping lines were slow to use the D&R Canal, both parties built boats and organized their own shipping companies. Both had an interest in early steamboat technology and used their experience to make the D&R an important and profitable addition to the coastal trade network.*

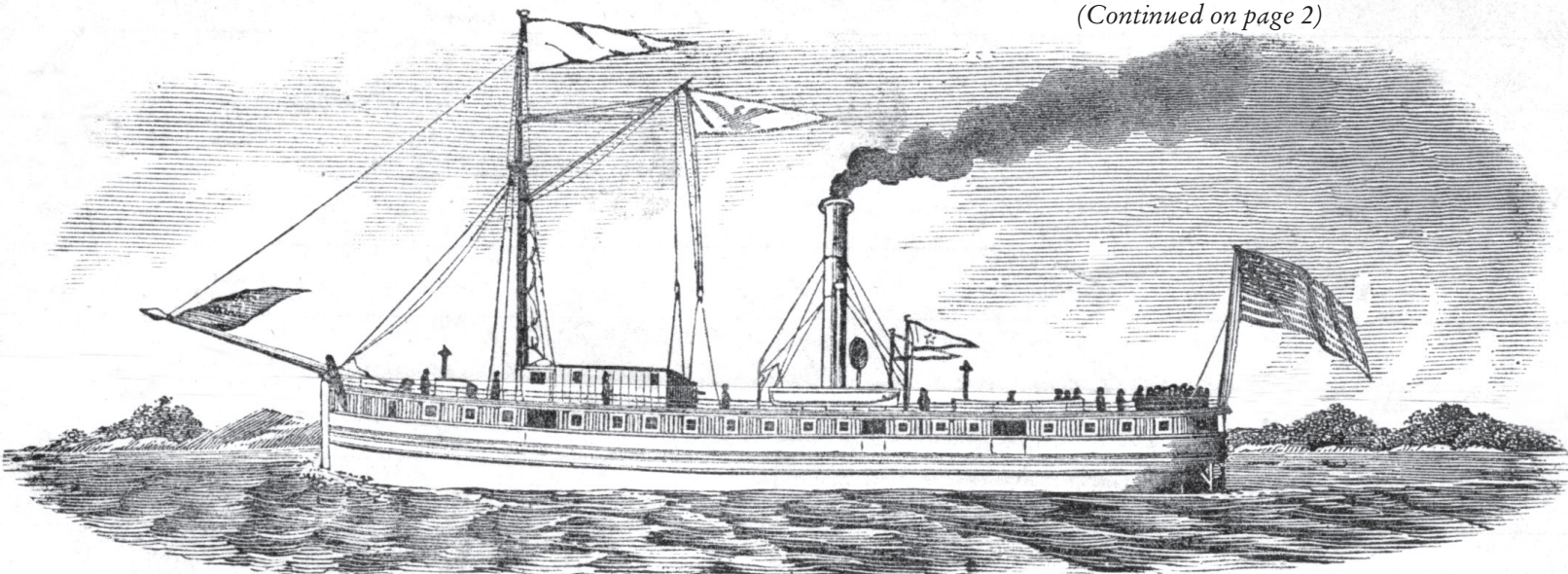
**B**uilt wider and deeper than the Morris Canal, the D&R could accommodate boats involved in the coastal trade. Although transporting anthracite coal might become profitable in the future, the coastal trade was already a well-established economic engine. An inland water transportation route between New York and Philadelphia, rather than the potentially stormy sea passage, would be a useful connection.

However, negotiating a canal under sail was not practical and transshipping goods to and from mule-driven canal boats was an equally bad idea. The Joint Companies partners understood that they could realize large profits if they could make steamboating on the canal practical. Over the next few years, the newspapers kept track as, Stockton and the Stevens built boats, and created a web companies to operate them.



*By the mid-1800s, the piers along New York's South Street, on the East River, served foreign trade from ocean-going ships, coastal trading schooners, and canal boats from a myriad of inland waterways.*

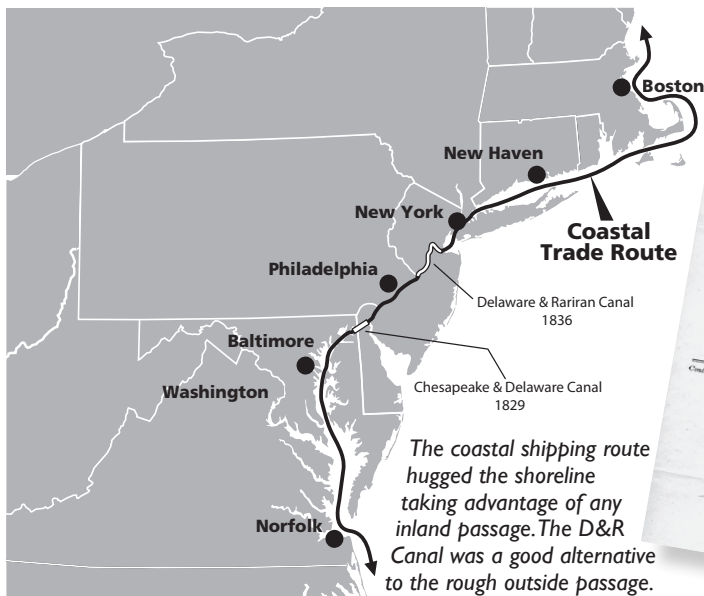
In 1842 an unidentified newspaper reported that Hogg & Delamater, of the Phenix Foundry of New York City built for the Delaware & (Continued on page 2)



*In the 1840s, shipping companies decorated their waybills with engravings of their new, iron-hulled, propeller-driven coastal steamers.*



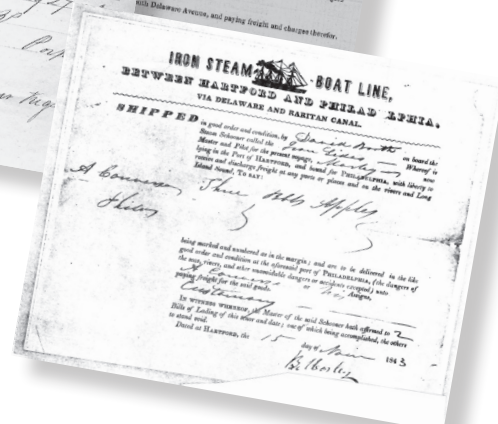
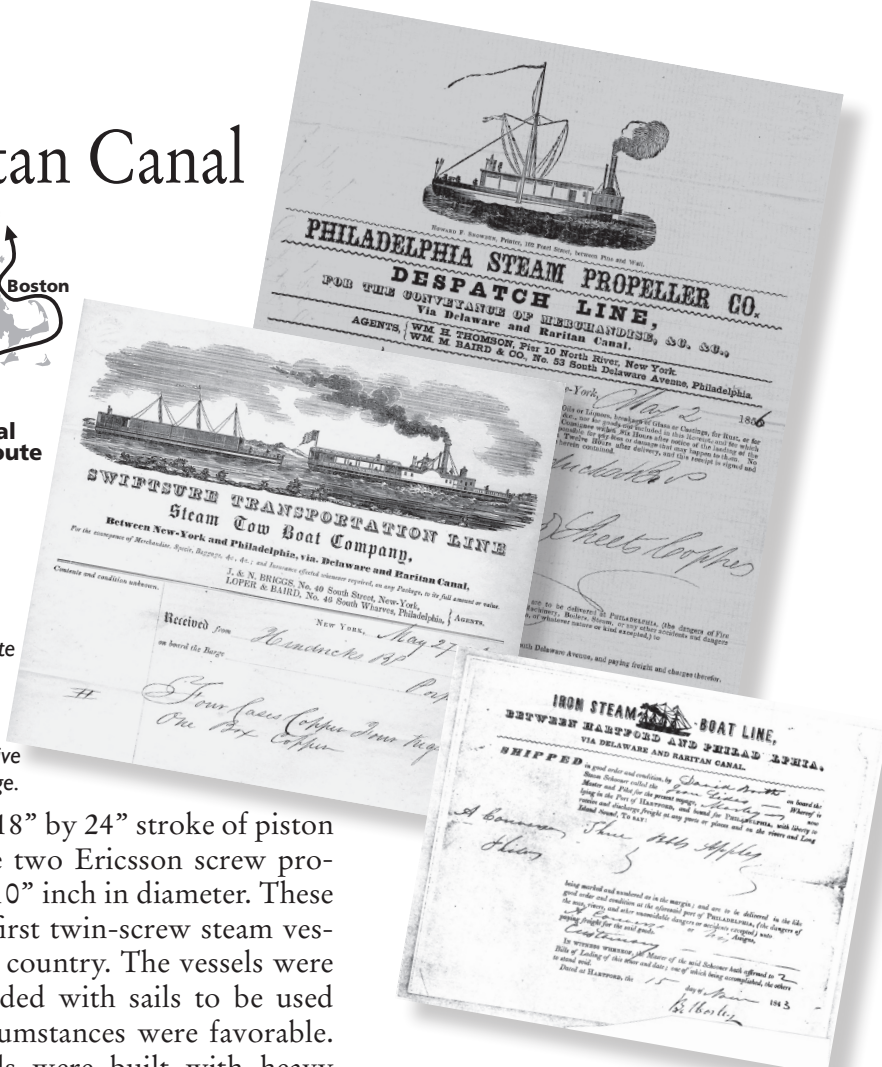
# IRON AND STEAM on the Delaware & Raritan Canal



(Continued from page 1)

Raritan Canal Company four iron-hulled, propeller-driven, steam-powered, canal boats. Built from a design furnished by John Ericsson, each measured 96' long, 24' beam, and 7' depth in the hold. They were named, *Anthracite*, *Black Diamond*, *Vulcan*, and *Ironsides*. Each was fitted with a 20-horsepower grasshopper-type en-

gine with 18" by 24" stroke of piston that drove two Ericsson screw propellers 5' 10" inch in diameter. These were the first twin-screw steam vessels in the country. The vessels were also provided with sails to be used when circumstances were favorable. Their hulls were built with heavy iron frames and sheathed with iron plates, mostly of American manu-



## Ericsson's Propeller

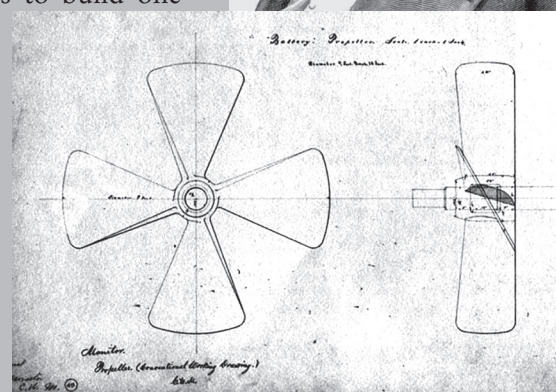
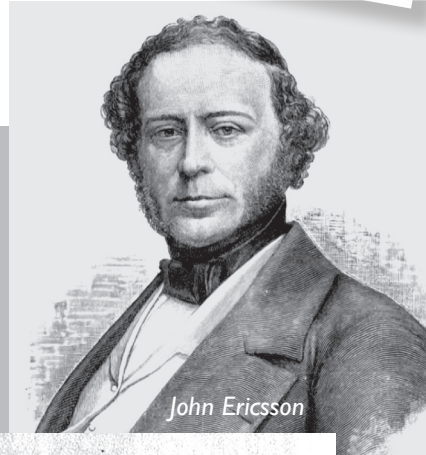
When Swedish-born inventor John Ericsson's design for a screw propeller steamboat was rejected by the British Admiralty, Ericsson built the *Robert F. Stockton* named for American naval officer and D&R Canal promoter Robert F. Stockton of Princeton, New Jersey. The *Stockton* was the first iron-screw steamship to cross the Atlantic, although mostly under sail.

In 1839 Ericsson moved to the United States where he used his skills in partnership with Stockton's political connections to design and build the sloop *USS Princeton*, the US Navy's first screw-propelled warship. The ship saw action during the War with Mexico. He went on to design iron-hulled, steam-powered

vessels that Stockton had built for use on the D&R Canal.

During the American Civil War, Ericsson submitted a unique design for an ironclad warship to counter the Confederate States plans to build one of their own. His ship, the famed *Monitor*, successfully fought with its counterpart the *Virginia* in a Battle in Hampton Roads.

His design went on to be used throughout the Civil War and his concept of an armored revolving turret continues to be used today. ■



A drawing of one of Ericsson's propeller designs.



## Waybills of Companies that Shipped via the D&R Canal

### Philadelphia Steam Propeller Company

New York to Philadelphia via the D&R Canal  
May 2, 1856

### Swiftsure Transportation Line Steam Tow Boat Company

New York to Philadelphia via the D&R Canal  
May 27, 1843

### Iron Steam Boat Line

Hartford to Philadelphia via the D&R Canal  
Shipped in the *Ironsides* – November 25, 1843

### Waybills on the left

facture. The iron hulls were protected from oxidation with red lead and oil. These vessels remained in service until 1850; when their bottom plates were found to be badly corroded, they were sheathed with wood planks.

On July 1, 1842 the newspaper *The Princeton Whig* reported that the *Black Diamond*, and *Vulcan*, owned by Captain Stockton, passed through the canal on their way to Philadelphia carrying coal in regular service between Philadelphia and New York. Later in the month the *New York Tribune* reported that a steamboat line had been established between Hartford and Philadelphia and that the *Ironsides*, the first ship of that line, had arrived in Hartford from Philadelphia in only 56 hours.

In 1831, the owners of the Joint Companies formed the New Brunswick Steamboat & Canal Transportation Co., later to be known as the Napoleon Company. Robert Stockton and the Stevens family held the  
(Continued on page 7)



This photo of the Martha Stevens of Philadelphia shows that steamers changed very little from those depicted in 1840s waybill engravings.

# THE MISSING CARRIAGE HOUSE

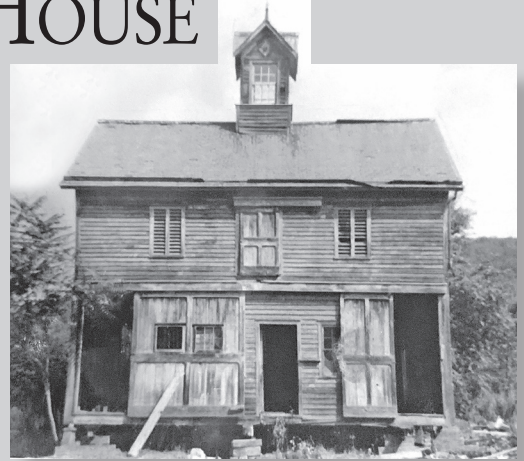
When Nathan A. Smith married in 1860, he moved into a comfortable house next the recently completed Waterloo Methodist Church. Each of his three brothers also built or renovated homes for themselves commensurate with their status as affluent country gentlemen. In addition, each built a carriage house to hold the equipment required for rural transportation of the day.

In the 1960s, interior designers Percy Leach and his partner Louis Gualandi began acquiring properties at Waterloo. They renovated many of the buildings and used their professional skills to decorate the interiors. They also restored three of the four carriage houses as venues for historic craft demonstrations. The Waterloo Foundation for the Arts was established and the Village became a tourist attraction. Today those three carriage houses survive in good condition but the fourth is missing.

Prior to selling the Waterloo Village property to the State of New Jersey, the Nathan Smith carriage house had been moved across Waterloo



An exterior view of the Percy Leach home.



Historic view of the Nathan A. Smith carriage house before renovation.

Road. Mr. Leach restored the building, added two wings and turned it into an elaborate home for himself. When Percy Leach passed away, the house was sold and is now owned by a restaurateur from New York City. It is now private property. ■



In this early 1900s photo of Waterloo, taken from the Morris County side of the Musconetcong River, we can plainly see the Nathan A. Smith carriage against the fields that once stretched up the Allamuchy Mountain



# The Morris Canal's Move into Jersey City & the New York Connection

By John Prieto

The Morris Canal's venture into Jersey City was a series of fits and starts that lasted some nine years. Excavation of the canal itself had begun in 1825 but it was in 1827 that the focus of its eastern terminus was suddenly on Jersey City.

Cadwallader D. Colden had become president of the Morris Canal and Banking Company late in 1826. Colden, a New Yorker, was a distinguished politician, having served as mayor of New York City, in the New York state assembly and senate, and as a U.S. representative. Colden was also a political partner with New York Governor DeWitt Clinton, who championed the Erie Canal. It was Clinton's aim to promote "internal improvements" not only for the state of New York, but also for the nation.

Clinton had ordered an 1818 publication that promoted canals. His desire for internal improvements was channeled through a New York association whose goal was to "[open] an extensive correspondence, with gentlemen

of the first distinction, throughout the Union." The association's president was, of course, Clinton; one of its vice presidents was Cadwallader Colden.

Colden's rise in New York also included stints as District Attorney and as a director (along with Clinton) of the Bank of Savings of New York in 1816. Colden dealt with many prominent New Yorkers in his career, but it was Clinton who held Colden close and involved him in many official duties. It was Clinton who appointed Colden mayor in 1818.

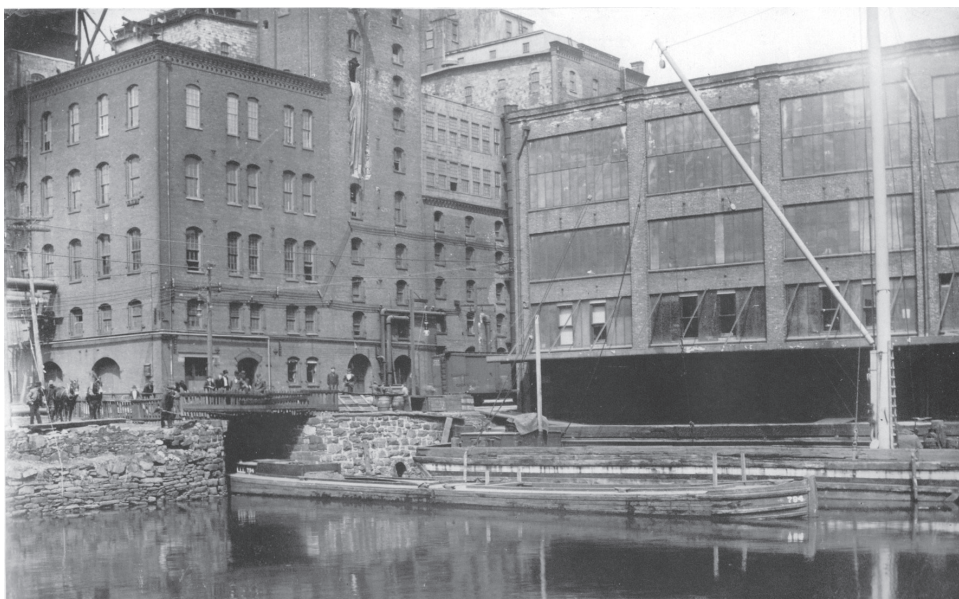
As the idea of constructing the Morris Canal took root, the decision of where to put the canal's eastern terminus became a subject of lengthy debate. The original canal charter of 1824 called for it to end at the Passaic River in Newark, but allowed that the route could be "altered." The charter also called for stock subscriptions to be advertised in New York City and for the canal company's banking office to be located in Jersey City. It is interesting to note that the canal company also



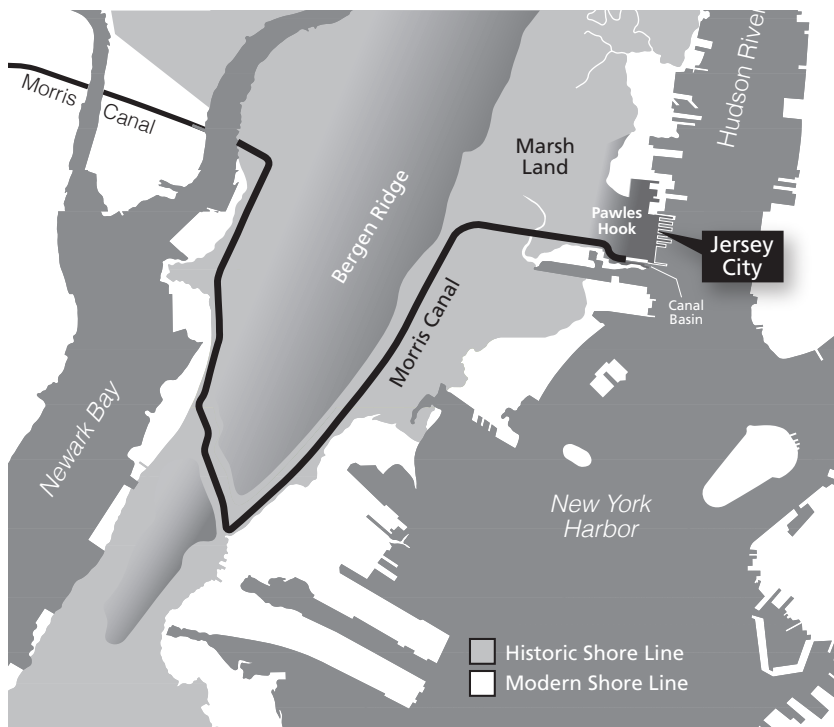
Cadwallader D. Colden

had a bank office in New York City and most of the canal company's directors were from New York.

To provide some context, it is relevant to discuss the activities in Jersey City in the years leading up to the canal's opening. The section of land on the waterfront in Jersey City known as Powles Hook (Paulus Hook) was owned by the Van Vorst family in 1804. Several sales of land were subsequently transacted. A group known as the "Jersey Associates" then sold 185 lots and New York City ferry rights to inventor Robert Fulton, who had a steamboat shop in Jersey City and had become partners with Cadwallader Colden. By 1826, Colden had gained the ferry rights; he in turn deeded them back to the Jersey Associates, who then deeded them to the New Jersey Railroad and Transportation Company in 1831. Near the end of his life, Colden, who owned land in Jersey City, deeded it to directors of the canal company who then turned it over to the Morris Canal and Banking Company in 1834. These latter events would help to shape the outcomes of the canal's terminus, the



This early 20th century photo shows canal boat 794 as it exits tide Lock 22 East into Jersey City's Little Basin while a group of bystanders watch from the Washington Street bridge.



LEFT: To reach the harbor, the Morris Canal followed a seemingly circuitous route south to a break in the Bergen Ridge, then north along the shoreline and across the marshes to Powles or Paulus Hook

BELOW: In the 19th century, Paulus Hook was one of the few places in, what would become, Jersey City with deep-water access to the Hudson River. Both the Morris Canal and New Jersey Railroad chose the hook to reach New York Harbor. Over the years, most of the shoreline was filled to create additional commercial waterfront property



railroads, and Jersey City itself.

Not long after construction of the canal was started, the company's financial outlook became cloudy. The company's stock subscription books were opened in April 1825 and work was underway that summer. By spring 1826, evidence of a scandal surfaced. In what later resulted in trials and some convictions, a Wall Street investor group led by Thomas Vermilyea had control of the finance committee of the canal company and had persuaded the company to sign blank stock certificates so that its shares could be used as payment to another company as part of a fraudulent series of financial transactions. In the resulting legal discourse and subsequent legislative action, it was Cadwallader Colden, as chair of the New York state senate judicial committee and one-time counsel for one of the conspirators, who publicly denounced what he felt was overreaching state regulation.

In 1826, as a means of reassuring the public, Colden was invited to review the canal, construction of which was well underway, as well as the company's business affairs. He evidently liked what he saw and purchased some company stock. In November, Colden was chosen as a director of the canal company; he was then immediately elected president. He remained in the New York state senate until August 1827 "when a regard to other paramount duties compelled him

to resign". It is not a stretch to imagine DeWitt Clinton having a hand in this decision.

Colden had been, like his mentor Clinton, an early promoter of such projects as the Erie Canal. In his celebratory memoir of the opening of that canal in 1825, Colden wrote that many states were considering canals and that "...we do not forget that the State of New York is but a member of the great political family, and that our welfare is intimately connected with the prosperity of the whole...". In speaking of the proposed Morris Canal, Clinton himself had written to its commissioners in 1823 that "...The demands of the City of New-York...and the manufactories of New-Jersey... will forever secure a great revenue from the canal." Clinton also met with Morris Canal visionary George P. Macculloch and later urged New Jersey to proceed with the canal so that coal from Pennsylvania could help the New York City area industrialize.

President Colden toured the canal in the spring of 1827 with Clinton, whose praise for the canal was likely in part an attempt to attract new investor money. It was in his first re-

port to the canal company's directors that Colden officially announced Jersey City would be the eastern terminus rather than Newark. He then ordered Ephraim Beach, the canal's chief engineer, to survey a route from Newark to Jersey City which would avoid the long trip down Newark Bay and back up New York Bay.

With the canal company's finances reflecting a sizable debt owed to the New York bank, the final route through Newark not yet determined, and the Jersey City extension not yet begun, an 1829 amendment to the charter allowed the canal company to borrow money and mortgage its waterway. This led to the so-called "Dutch Mortgage" whereby the canal could repay its debts.

By 1830, Ephraim Beach had concerns about the inadequate soil in the marshes between Newark and Jersey City, but did have a plan for the required locks to be used. He cited Harsimus Cove in northern Powles (Continued on page 7)



# The Morris Canal Muse of a Nutley Artist

**W**hen we think of the towns that the Morris Canal once traversed, Nutley doesn't typically come to mind. However, as the canal wended its way south through Bloomfield, it did skim the southwest boundary of Nutley. Because the canal contributed little to Nutley's history or industry, few stories have survived relating to the Morris Canal there. Yet, one was recently shared with us.

Anne Neatby of Prince Edward Island, Canada, contacted the Canal Society of New Jersey to relate a story involving her great grandfather and the Morris

Canal. The Reverend William Stuart had served as a pastor at Franklin Reformed Church in Nutley: He was also an accomplished amateur artist who enjoyed walking along the Morris Canal towpath. One day in 1911, he was painting a landscape from a bridge over the canal when an incident occurred that spawned the story that is still told amongst his descendants.

While Rev. Stuart was painting, two of his grand-

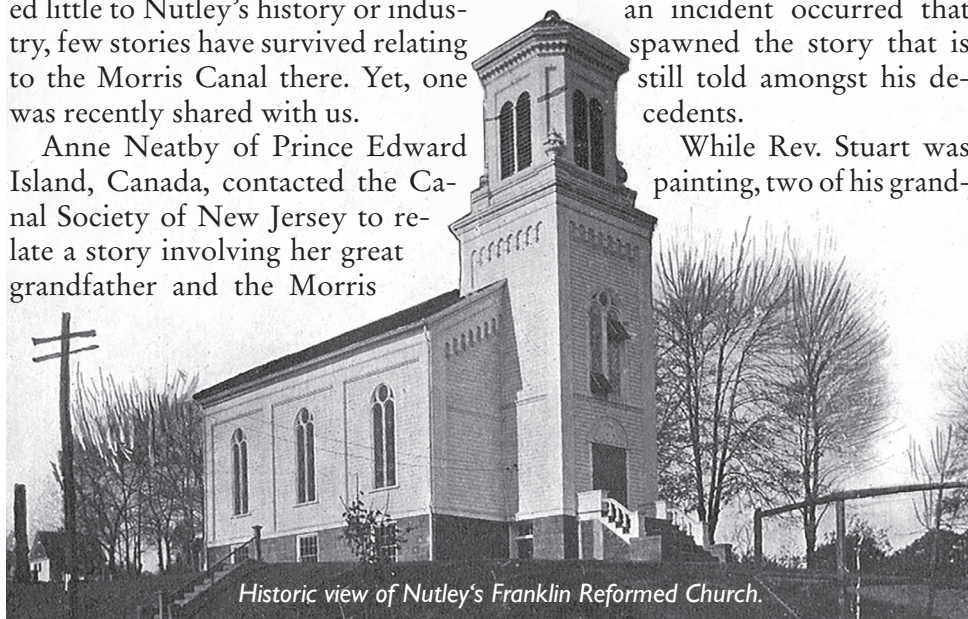


Reverend William Stuart's painting of the Morris Canal.

children, Elizabeth, age 6, and Ernest "Budge", age 3, were playing along the towpath when Budge's hat blew off. When he tried to retrieve it, he fell into the canal. Thinking quickly, Elizabeth knelt down and pulled her younger brother to the safety of the towpath. After determining that Budge had suffered no harm, Rev. Stuart took him home, a distance of about three-quarters of a mile.

At the time, the incident was considered noteworthy in the small town of Nutley (population 6,010 in 1910), as a short article appeared in the next week's local newspaper. However, it was also memorialized in a different way: Rev. Stuart included his granddaughter in his painting, gallantly rescuing her little brother from the Morris Canal. Appropriately, this painting is titled *Life Saver*.

Today, the canal's route through Nutley has been replaced by the Garden State Parkway and the parsonage where Rev. Stuart once lived has been razed, but the Franklin Reformed Church still has an active congregation. The story of a brother and sister playing along the Morris Canal one day in 1911 survives through the artistic talent of their grandfather and in family's oral history. ■



Historic view of Nutley's Franklin Reformed Church.

## ON THE LEVEL



### THE CANAL SOCIETY OF NEW JERSEY

PO Box 737, Morristown, New Jersey 07963-0737

*On the Level* is published three times a year by the Canal Society of New Jersey.

#### OFFICERS

**President:** Joe Macasek  
**Vice President:** Tim Roth  
**Treasurer:** Ken Roser  
**Recording Secretary:** Carl Loutzenheiser  
**Corresponding Secretary:** Vacant  
**Past President:** Vacant

#### DIRECTORS

Bruce Blondina  
 Bob Bodenstein  
 Janice Escobar  
 Rod Howarth  
 Judy Keith  
 Steve Lauf  
 Jim Lee III  
 Bill Meier  
 Bill Pegg  
 Rich Richter  
 Bierce Riley

#### CONTACT INFORMATION

**Financial Administrator:** Lew Wefferling – 973-768-4268  
**Membership Chairman:** Judy Keith – 973-347-9199 – jakeith23@verizon.net  
**Museum Director:** Rich Richter – 973-728-0316 – FIERO87@Verizon.net  
**OTL Editor:** Bierce Riley – 973-455-0491 – Bierce.Riley@gmail.com

# The Morris Canal's in Jersey City

(Continued from page 5)

Hook as the recommended spot for the canal's terminus. It was also in 1830 that negotiations for the terminus were heating up; in the end, the railroads, ever pressing for access to New York City, were to terminate at the Jersey Ferry Wharf in Harsimus Cove. The canal would have to settle for its terminus being south of the wharf at Communipaw Cove.

President Colden realized that finances were again an issue by 1832. Efforts were under consideration to borrow even more money to complete the extension to Jersey City. However, he felt confident that the company was in a sound condition and felt empowered by the section of the charter that allowed the canal company to create a trust company; he felt that the trust would not be liable for the debts of the company.

Colden did not live to see the completion of the canal's extension to Jersey City, which occurred after much delay and no finalized basin in 1836. In the years after Colden's death, the canal company would lease its water for manufacturing, enhance its banking operations, increase shares to help pay for the Jersey City extension, and enjoy cooperation with the railroads. But the pull of New York would still be evident, as its increase in population and demand for resources carried by the canal would lead to the canal's enlargement starting in the 1840s.

Perhaps foreshadowing the eventual extension to Jersey City at the Hudson River was the Army Corps of Engineers' report to the Canal Commissioners in 1823. Their concern was that 25-ton boats would be "too small for the navigation thence to the City of New-York, in rough weather." Having a New Yorker with Jersey City land holdings may have also been a factor. ■



The steamer Nellie, formerly the Harry, worked on the D&R Canal in the 1890s.

## IRON & STEAM on the D&R

(Continued from page 3)

majority of the stock. The company operated steamboat service at both ends of the Camden & Amboy Railroad. When the D&R Canal opened in 1836, they started running freight service through the canal. To control toll rates, liability, and payments due to the state of New Jersey under the terms of the Joint Companies charter, the NBS&CTCo. held a controlling interest in a tangle of shipping companies all making use of the Joint Companies' canal and railroad. This arrangement insured the Joint Companies owners maximum profits.

Now that speed was becoming a point of pride, it was found that fast-moving steamboats created a wash that damaged the banks of the canal. To solve that problem, the sides of the canal prism were rip-rapped with a stone lining extending down 3½ feet below the surface of the water to prevent erosion.

In 1853 the locks on the main canal were lengthened from 110 feet to 220 feet to accommodate boats of larger dimension as well as steamboats with a barge or canal boat in tow. In addition, the canal was widened at bridge crossings to permit two boats to pass at the same time. Previously, one boat had to slow to let another pass, causing numerous collisions, some of them serious. The improvements were covered by a \$700,000 loan that was charged to capital stock.

It must have been quite a scene with mule-powered canal boats and steam vessels competing for use of the canal. Unfortunately all this occurred before popular photography could record the changes. We hope that these reports, waybills, and engraving of some of the early steamboats will help bring this story back to life. ■

The pictures, waybills and newspaper article used to create this story were donated to the CSNJ by Bill McKelvey.



### 2021 D&R Canal Calendar

This lovely full-color calendar features images taken by people who visit the towpath. The calendar includes a map and a history of the D&R Canal. The cost is \$20, with all proceeds going to the D&R Canal Watch to purchase items for the park.

Supplies are limited, so order your copy now.

To order, please email Linda Barth at [barthlinda123@aol.com](mailto:barthlinda123@aol.com), and she will arrange for delivery.



# DEBBIE WEFFERLING

With sadness, we report that Debbie Wefferling of Caldwell, New Jersey, passed away at home on May 11, 2020, surrounded by her loving family, after a long illness. She was 70 years old. Born in New York, New York, she was graduated from Verona High School in 1967.

Perky and amiable, Debbie contributed to the Canal Society of New Jersey in two major areas: at Waterloo and as a caterer. As a volunteer at Waterloo Village, she worked at the front gate. Debbie often stood between the parking lot and gatehouse, greeting visitors, handing out

village maps, and walking them over to the orientation area. Her vivacious personality built visitor interest even before most had entered the Village.

Debbie had a passion for cooking, whether for two or two hundred. After attending only a few CSNJ program meetings, she offered to make dinner for the next meeting. Her wholesome and delicious hot meals always included a hot dessert, often involving three or four large chafing dishes. Debbie continued to serve in this capacity as long as she was able.

She was also an active member of the



Debbie Wefferling

First Presbyterian Church of Caldwell where her coffee hour was a favorite, with the different treats she prepared. When not cooking, Debbie was busy crocheting or doing stained glass work. She also enjoyed boating with her husband, Lewis, a member of CSNJ's Advisory Board.

Debbie is survived by her husband, Lewis; two children, Lawrence and his wife, Debra Z.; daughter Laurel Wefferling-Pezur and her husband, Michael; nine grandchildren and too many friends to count. She will be remembered by CSNJ as the petite bundle of energy who changed our program meetings, for which we are extremely grateful. ■

## CANAL SOCIETY MEMBERS

We hope you have enjoyed this Story Issue of *On the Level*. We are sorry that we haven't had a chance to be together since January. Due to the health crisis, our program meetings, walking tours and other events have been canceled. To get back on track, we are planning an online program meeting for this September and will continue to offer online activities until things are again back to normal. Some of you may already be old hands at using ZOOM or other applications to communicate with friends and family. If not, I think you will find that it's not all that complicated. We, too, are learning and improving our skills as we go along. We hope you will join us on-line for the September meeting.

*Joe Macasek, President CSNJ*

[www.CanalSocietyNJ.org](http://www.CanalSocietyNJ.org)



ADDRESS SERVICE REQUESTED

Morristown, New Jersey 07963-0737

PO Box 737

CANAL SOCIETY OF NEW JERSEY

FIRST CLASS MAIL