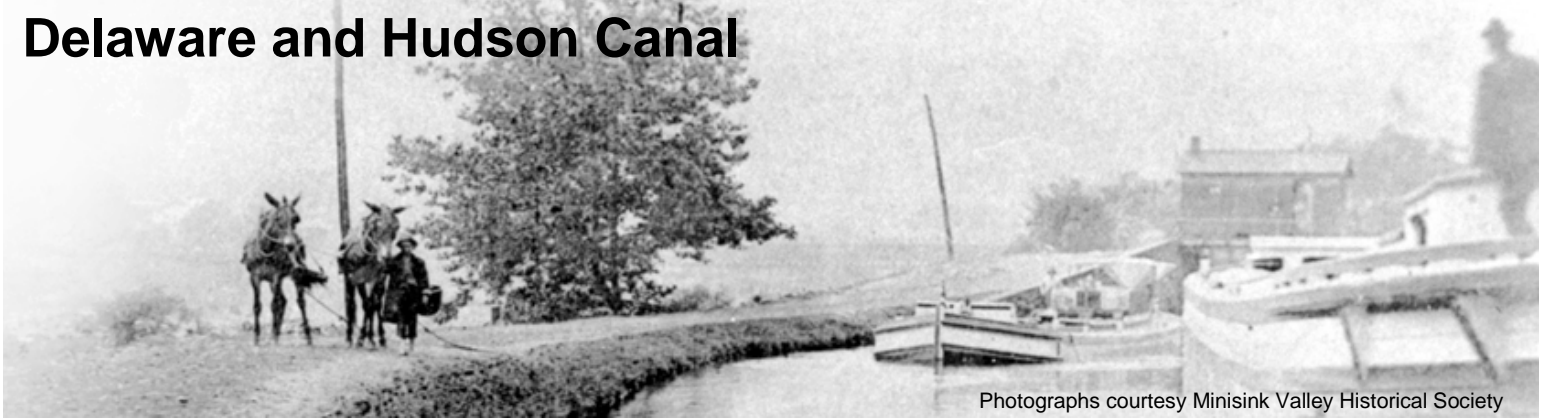




Delaware and Hudson Canal



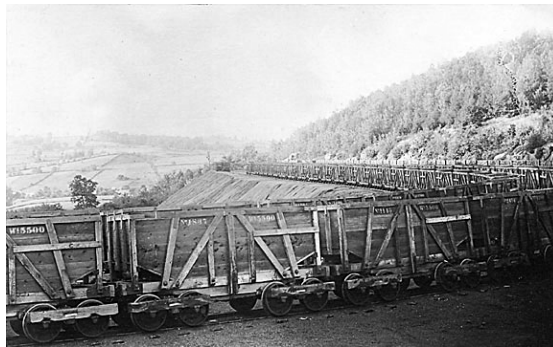
Photographs courtesy Minisink Valley Historical Society

The Delaware and Hudson Canal was the first canal in this nation built as a private enterprise. Constructed from 1825 to 1829 — with 16 miles of gravity railway and 108 locks over a 108-mile canal — it was built to transport anthracite coal from mines in northeastern Pennsylvania to markets on the Hudson River. Competition from railroads closed the D&H Canal system in 1898, after 70 years of operation.

The D&H Transportation System

The Delaware & Hudson Canal and Gravity Railroad was a system of transportation between northeastern Pennsylvania coal fields—owned by Philadelphia businessmen William and Maurice Wurts—and ports of New York and New England. From its opening in 1828 to its demise in 1898, the canal system transported millions of tons of anthracite.

The D&H Canal Company relied on engineering experience and technology from other canals and financial backing from investors and stockholders. The D&H was among that era's few privately-owned canals.



Coal train near Farview, Pennsylvania

Carbondale to Honesdale: Gravity RR

The D&H Canal Company planned to move their coal from the mines in Carbondale, Pennsylvania, to the Hudson River entirely by canal. However, the availability of water at the summit and the number of locks needed to scale Moosic Mountain between Carbondale and Honesdale precluded this plan.

A 16-mile gravity railroad was the solution, and construction began in 1827. The "gravity," designed by D&H chief engineer John B. Jervis, utilized a series of inclined planes and stationary steam engines to pull carloads of coal up and over Moosic Mountain, a rise of almost 1,000 feet.

In his effort to use the latest transportation technology, Jervis's assistant engineer Horatio Allen brought to Honesdale America's first steam locomotive. On August 8, 1829, the *Stourbridge Lion* was run back and forth on a trip covering a distance of about one and a half

miles. The track made of hemlock rails with iron railcap and with ten foot gaps between ties had been constructed for a much lighter locomotive and would not support the *Lion*.

Completion of the "gravity" in 1829 enabled the D&H Canal to transport a great percent of its tonnage in coal.



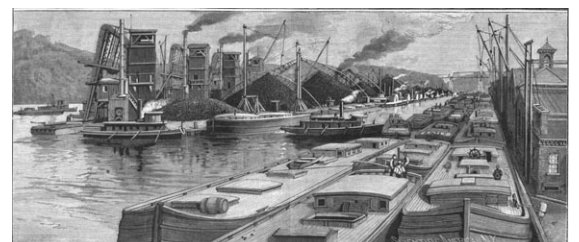
Canal boats in the Honesdale Basin

Honesdale to Rondout: Canal

Construction of the canal lasted from 1825 to 1828, and employed thousands of laborers. The work—done by hand with pick, shovel, and blasting powder—was difficult and often dangerous.

Navigation on the canal began at the boat basin in Honesdale, where the coal was transferred from gravity railroad cars to canal boats. The canal's route followed the banks of the Lackawaxen River until it met the Delaware.

Boats crossed the Delaware at Lackawaxen, where the canal then paralleled the New York shore of the Delaware River to Port Jervis. From there the canal turned eastward, following the Neversink and Rondout Creeks to the Hudson River. The coal was unloaded at Rondout and sent by steamship to market.



Coal Docks in Rondout, New York

Growth and Expansion



Canal Laborers Courtesy National Canal Museum

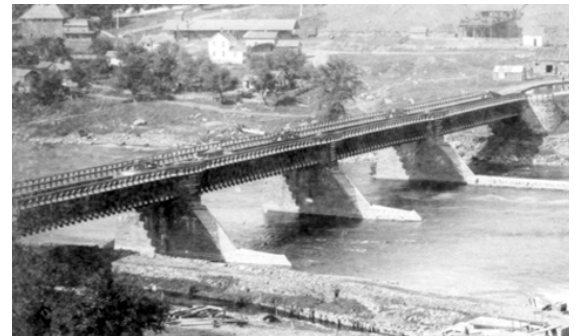
In its early years, the D&H Canal was buffeted by a wide variety of troubles: seepage and settling of the banks, a regional cholera epidemic, opposition by Delaware River raftsmen, fluctuations in the national economy, and resistance to the use of anthracite. In addition, the D&H competed with other canals (Delaware & Raritan, Morris) for the same markets in New York City.

Stock prices fluctuated during the early years, but by 1848 the D&H Canal was one of the nation's largest private corporations. The formation of the Pennsylvania Coal Company, which brought coal by gravity railroad to Hawley, Pennsylvania, encouraged the enlargement of the D&H Canal.

The D&H Canal was originally 32 feet across at the top, 20 feet at the bottom, with a depth of four feet; its 76' x 10' locks could accommodate 20- to 30-ton-capacity boats.

In the late 1840s and 1850s, the canal's trunk was deepened to 5, then 6, feet. Its locks were enlarged to 90' x 15', increasing its capacity from 200,000 tons to one million tons annually. Forty-ton capacity boats were gradually replaced by boats of up to 140 tons, which could go directly from the canal to markets up and down the Hudson.

During this period of expansion, John A. Roebling was brought in to work on four suspension aqueducts, one of the distinguishing features of the D&H Canal.



Canal Boats crossing the Delaware Aqueduct

Life along the Canal

Life on a canal boat was a "family business." Wives and children worked 15- to 20-hour days alongside boatmen, eking out a meager existence with "the company." At 1-3 mph, the canal boats pulled by mules made the round trip in 7 to 10 days.

The D&H Canal affected life throughout the region. Irish and German immigrants who built and enlarged the canal increased the cultural diversity, bringing new customs to an

area populated mainly by Dutch, English, and German settlers and a few remaining Native Americans.

New towns and industries (boat builders, glass works, foundries) sprang up along the canal. Previous industries—lumber mills, paper mills, tanneries, stone quarries—prospered with improved transportation. Others, like the Rosendale natural cement industry, took advantage of the proximity of the D&H Canal.



Boatmen hoped to make 16 round trips per season.



D&H Canal through Ellenville, New York

Demise of an Era

In the latter part of the 1800s, railroads grew while canals declined. Transportation by canal was limited by winter weather conditions, droughts, and floods. Railroads were better able to reach new markets. By the turn of the 20th century in the Upper Delaware River Valley, the Erie Railroad was thriving and the D&H Canal was abandoned.

Today, little survives of the D&H Canal and its associated industries. However, remnants of the canal may be seen along its former route.



Roebling Bridge prior to restoration in 1986

For More Information

The *D&H Transportation Heritage Council* is a partnership of public and private organizations promoting the appreciation and preservation of the D&H Canal and Gravity Railroads.

www.dhthc.org

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