

Chapter 3 - History of the New York State Canal System

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Chapter 3 - History of the New York State Canal System

"The Erie Canal . . . made New York the Empire State . . ."

Samuel Eliot Morison,
The Oxford History of the American People,
1965, pp. 419-20.

In 1825, when the Erie Canal was completed, New York City was one among several East Coast cities competing with Philadelphia for primacy in trade and commercial shipping. Much of upstate New York was wilderness, with only widely scattered villages and farms. The waterways of central New York provided uncertain and tenuous transportation between the city and its upstate hinterland, with difficult, slow and expensive portages connecting the natural water routes.

The Erie Canal changed the face of New York forever. The port of New York became America's premier port, tapping not only its own colonial frontier but the entire Great Lakes basin. New York City became "the Commercial Emporium of America," with corresponding wealth and influence. New York State, with transportation and markets assured, was able to develop fully its fertile farmlands and mighty industrial potential.

Towns sprang up literally overnight along the canals. Albany, the eastern gateway, doubled its population in a few short years. Troy became a significant industrial complex, manufacturing goods from Adirondack iron and serving as the terminus for New England trade. Utica quadrupled its population from 2,900 in 1820 to 12,700 in 1840. Syracuse, described as a "few scattered and indifferent wooden houses" by a contemporary observer in 1820, was a bustling city of 11,000 and a great producer of salt by 1840. Rochester, "one wide and deep forest" in 1812, had a population of 20,000 by 1840, serving as the shipping point for the wheat of the Genesee River Valley and an important manufacturer of flour. Buffalo, which had 200

inhabitants in 1812, had reached a population of 18,000 by 1840, serving as the gateway to the Great Lakes, a great industrial center, and the embarkation point for the tide of emigration to the West.

The following is a brief history of the canals and the canal region. Interested readers may wish to peruse the many fascinating books that are available on the subject. Citations are provided in the bibliography included as Appendix A3 to this report.

3.1 PREHISTORIC OVERVIEW

Human populations entered present-day New York State some 12,000 years ago when the glacial ice that had covered the area began to retreat. The environment consisted of spruce and pine forests interspersed with open parklands and meadows. Archeologically, it is known as the "Paleo-Indian" period, characterized by the presence of fluted projectile points. Paleo-Indian groups were small and highly mobile, probably trading over considerable distances.

During this period, Lake Ontario was part of a larger body of water known as Lake Iroquois, which extended south of Lake Ontario's modern shoreline to include Cayuga Lake. Lake Iroquois drained eastward through an outlet at present-day Rome.

As time went on, Native Americans began to cultivate maize, beans and squash, and formed permanent settlements, often along creeks and rivers.

Early Colonial Period

When Europeans entered the area in the early 1600s, the Iroquois dominated upstate New York. This period was characterized by Native American population expansion and an increased communication among tribes, leading to the formation of the League of the Iroquois. The Iroquois usually occupied sites on high, defensible ridges, protecting them with palisades and stockades. The dwellings were bark-covered

longhouses. The Iroquois tended to move their villages every 10 or 20 years as farming fields lost fertility and convenient firewood supplies became depleted.

The first European traders arrived in the area shortly after Henry Hudson's 1609 voyage. By the third quarter of the 17th century, official trading parties were sent westward from Albany, using the Mohawk River as the gateway to rich sources of furs. At Fort Orange (Albany), Iroquois brought furs to trade for guns, cloth, and other goods, following the "Iroquois Trail," which traced the route of the Mohawk River. By the mid-18th century, European encroachment had pushed the Iroquois back toward the Finger Lakes.

In the early 17th century, the Iroquois were united in a confederacy of Five Nations. From west to east, stretching from the Genesee River Valley to the Finger Lakes and through the Mohawk Valley, lived the Seneca, Cayuga, Onondaga, Oneida, and Mohawk groups (see Exhibit 3-1, "Location of Native American Tribes, ca. 1600"). In the early 18th century, the Tuscarora of North Carolina came north and were officially adopted as the Sixth Nation of the Confederacy.

3.2 HISTORICAL OVERVIEW

As soon as they had explored the area, European traders and colonists recognized the importance of the Hudson and Mohawk Valleys as a trade corridor. The Mohawk River corridor, as the connection to the Hudson River and New York City and as the lowest pass through the mountains north of Birmingham, Alabama, became known as the "gateway to the west." At first, Albany served as the hub of this trade, with Mohawks and Dutch traders doing business at Fort Nassau, then at Fort Orange. Before long, trading was underway at Fort Stanwix (Rome), Fort Oswego, and Fort Niagara. Beginning at Schenectady, travelers followed the Mohawk River to Fort Stanwix. After a mile-long portage (the "Great Carrying Place"), boats could be placed in Wood Creek for the journey through Oneida Lake, the

Oneida River, the Oswego River, and finally to Fort Oswego on Lake Ontario.

European settlers began to push westward with the traders and, as early as 1713, German Protestant refugees had settled on the Schoharie Creek. Still, the upper Mohawk Valley remained very sparsely settled in the first half of the 18th century.

As early as 1730, alterations were made to facilitate travel on the Mohawk River. Just east of Fort Stanwix, between the Oriskany and Sauquoit Creeks, an artificial channel was dug to cut off a loop in the river.

By 1735, the Mohawk Valley from Fort Hunter to Frankfort was filled with German farmers, and numerous boats were transporting traders' merchandise as well as the farmers' grain and potash and pearlsh along the river. Bark and dugout canoes were still in use, but bateaux – flat-bottomed, shallow-draft vessels – were more frequently used for travel.

After the French and Indian War, western settlement increased. The Treaty of Fort Stanwix of 1768 pushed the Iroquois west of present-day Rome. That same year, Governor Sir Henry Moore proposed that the Mohawk River be improved for navigation. Twenty-four years later, the prominent Albany merchant Philip Schuyler began the Western Inland Lock Navigation Company to explore ways of improving inland navigation in what is now upstate New York. The company built dams, cleared channels, and constructed short canals complete with dams and locks, to bypass rapids and eliminate portages. In 1793, the company cleared the debris from the channel of Wood Creek, and cut short canals across the necks of its various meanders. Cutting through solid rock, in 1795 the company constructed a mile-long canal at Little Falls, with five wooden lift locks, one guard lock, and a dam. In Rome, a 1.7-mile-long canal with a feeder, two brick locks, and two dams was built in 1797 to connect the upper Mohawk River with Wood Creek. The following year saw the construction of the German Flats Canal, a 1.1-mile-long stretch with a stone lift lock, a guard lock, and a dam. From 1793 to 1803,

various improvements were implemented in the Mohawk River, such as the construction of "wing dams" to raise water levels and allow for the passage of boats. In 1803, four wooden lift locks, with dams and sluices, were built at Wood Creek to aid navigation between Rome and Canada Creek.

To improve navigation from the Hudson River to Lake Champlain, the Northern Inland Lock Navigation Company was incorporated in 1792. The Northern Company, however, did not succeed in building any locks or other navigation features, and was inactive by 1798.

Many Revolutionary War scenes were played out in the canal corridor, including major battles near Saratoga and at Oriskany. Interest in canal building from a military perspective was heightened after the War of 1812, in part because transporting \$400 worth of cannon from New York to Buffalo had cost \$2,000. In addition, since Canada did not become annexed to the former colonies, the realization grew that an alternative to Canada's Great Lakes outlet to the Atlantic and Europe was necessary to ensure shipping primacy for the United States.

Construction of the Erie Canal began in 1817, and it opened for business on October 26, 1825. It was built under the direction of Governor DeWitt Clinton, and its detractors referred to the Canal as "Clinton's Ditch." The prism, or trough, of Clinton's Ditch was 40 feet wide and 4 feet deep. To one side of the Canal was a berm (heel path), and to the other side was the towpath, where men and animals pulled boats through the Canal. Holmes Hutchinson's 1832 surveys led to the first coherent maps of the Canal two years later, showing how Clinton's Ditch closely followed the contours of the riverbank.

Like Clinton's Ditch, the Champlain Canal was initiated in 1817, but this shorter canal was completed two years earlier, in 1823. It linked the Hudson-Mohawk corridor with Lake Champlain, and its ability to export iron and lumber from the Lake Champlain area contributed greatly to the rise of an industrial center at Troy-Cohoes-Albany.

As early as 1819, a side cut in Clinton's Ditch led to the Salina saltworks on Onondaga Lake. From 1825 to 1828, this passage, the Oswego Canal, was extended to Lake Ontario with a combination of excavated prism and slackwater navigation.

At the same time, the locks of the old Seneca Lock Navigation Company, which had been built between 1818 and 1821, were rebuilt, forming the Cayuga-Seneca Canal. This canal met Clinton's Ditch at Montezuma. The 21 miles of the Cayuga-Seneca Canal contained eleven locks.

When the canals were built, no formal engineering training existed in the United States. Canal construction provided a hands-on school for people who became prominent engineers, such as John B. Jervis, who later built the Croton Aqueduct to supply New York City with water.

Not only did the Canal System provide a link to the Great Lakes and greatly facilitate the movement of goods and people throughout New York State, but it had a profound impact upon the area it served. Many upstate communities were sited specifically as canal trading centers and owed their economic life to the thriving business engendered by the Canal (see Exhibit 3-2, "Historic Photographs").

Cultural life was also greatly affected along the canal route. The area has been called a "psychic highway" or "burned-over district," referring to the religious and social movements that thrived along the canalway. According to some scholars, after the flurry of new prosperity brought by the Canal had abated, communities turned to moral and religious matters. Evangelism found fertile ground in the evils and immoralities of canal life (as the transplanted New Englanders along the canal belt viewed canal construction crews and boatmen). Increased prosperity and leisure time allowed various "isms" to take hold. Particularly noteworthy were the Antimasonic movement and the introduction of the Mormon religion.

The Canal connected villages and cities as both commercial and cultural centers. Educational programs began as early as 1826, when Professor Amos Eaton, from what is now Rensselaer Polytechnic Institute, instituted a "Traveling

School of Science." Settlements grew exponentially. For example, in 1821, three families lived at Lockport; by 1825, the population had skyrocketed to 1500.

The Champlain Canal was improved and lengthened to 64 miles in 1832. Around the same time, the Cayuga-Seneca Canal was enlarged and improved. By 1835, more extensive enlargements to the Erie Canal had begun, a process that was to continue until 1862, nearly 30 years. The Enlarged Erie Canal measured 70 feet across at the top of the prism, and 7 feet deep. Not only was this canal larger than Clinton's Ditch, it also took a straighter route, relying less upon natural topography. While large parts of Clinton's Ditch were incorporated into the Enlarged Erie Canal, other sections of the 1825 canal were abandoned.

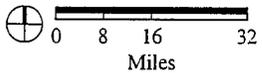
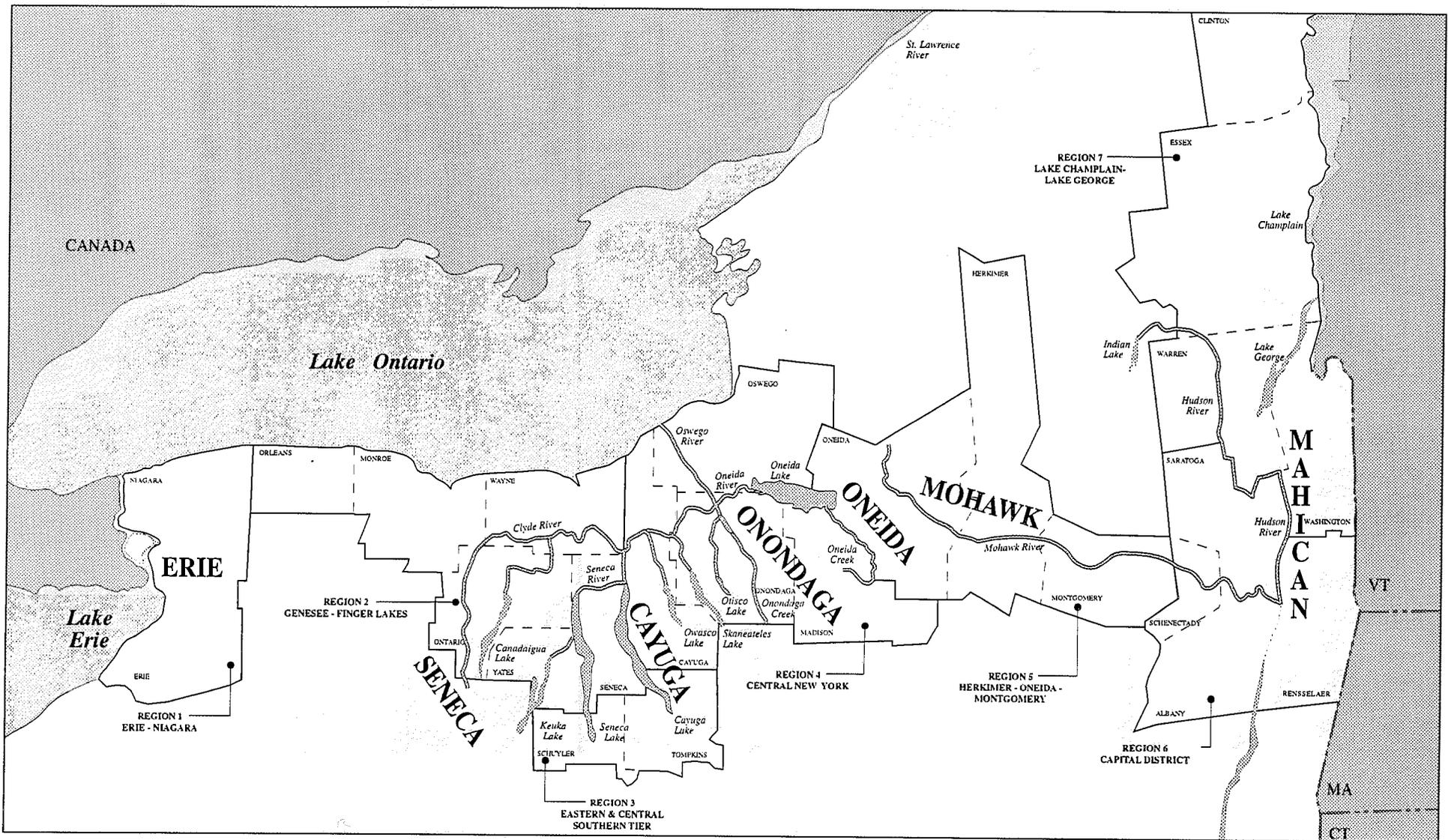
The Canal was the scene of the massive 19th-century emigration movement, as people who had arrived in New York Harbor from Europe followed the Canal to Buffalo, transferring to other vessels to head westward to Michigan and beyond.

By the mid-1830s, the Canal had lost passenger traffic to the new railroads, but heavy bulk cargo was still transported by canal. By the end of the century, much of the cargo business also had been lost to the railroads.

The Enlarged Erie Canal was dredged extensively in the 1880s, and much of the Canal was re-enlarged in 1895. The development of steam-powered and steel vessels made a protected waterway obsolete; and, in 1905, the first contracts were let for the excavation of the Barge Canal, which was to run through existing waterways, such as the Mohawk River. The Barge Canal was opened for business in 1918, and sections of the previously enlarged Erie Canal were abandoned, just as Clinton's Ditch had been abandoned earlier. The Barge Canal includes a wide range of engineering structures and mechanical and electrical equipment including hydroelectric stations. The state also built terminal facilities to encourage traffic. The inability of the Canal to handle ships larger than barges, however, as well as the development of pipelines, the growth of the trucking industry and the

completion of the St. Lawrence Seaway, have contributed to the reduction of commercial canal traffic. Very little commercial traffic now travels along the Canal, but its potential for recreational use is now being recognized.

NEW YORK STATE CANAL RECREATIONWAY PLAN



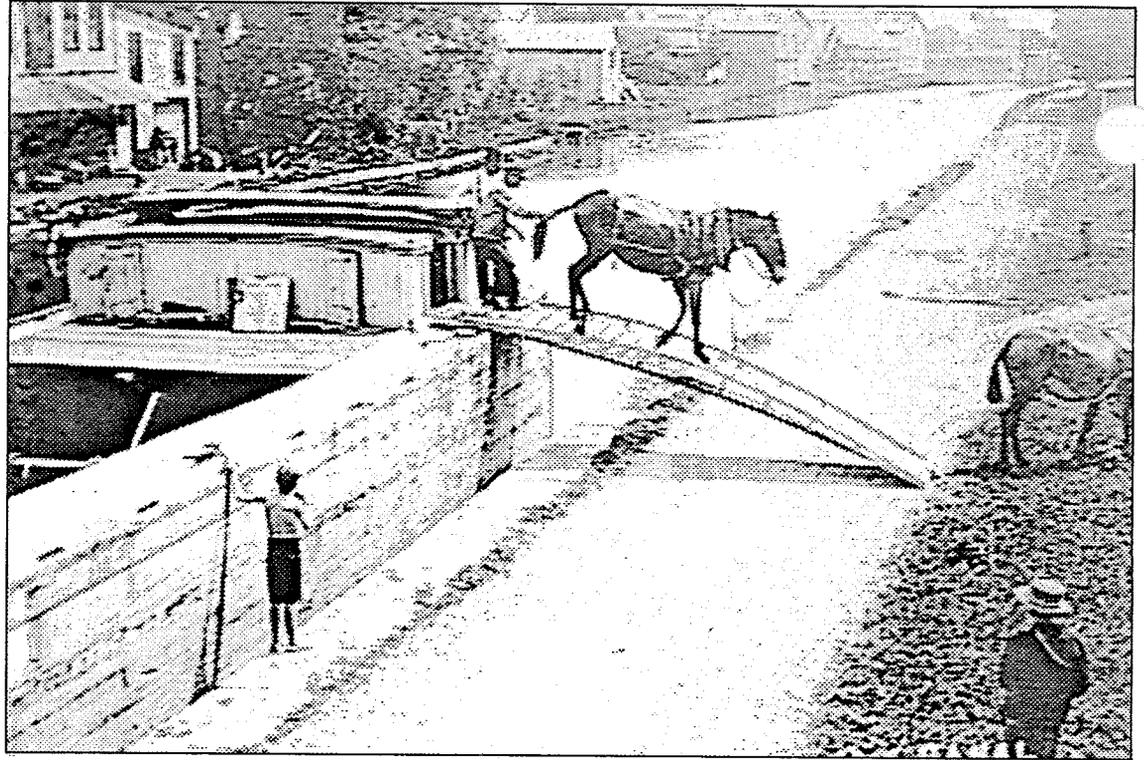
- Planning Region Boundary
- - - County Boundary

Location of Native American Tribes, circa 1600

Beyer Blinder Belle Consortium

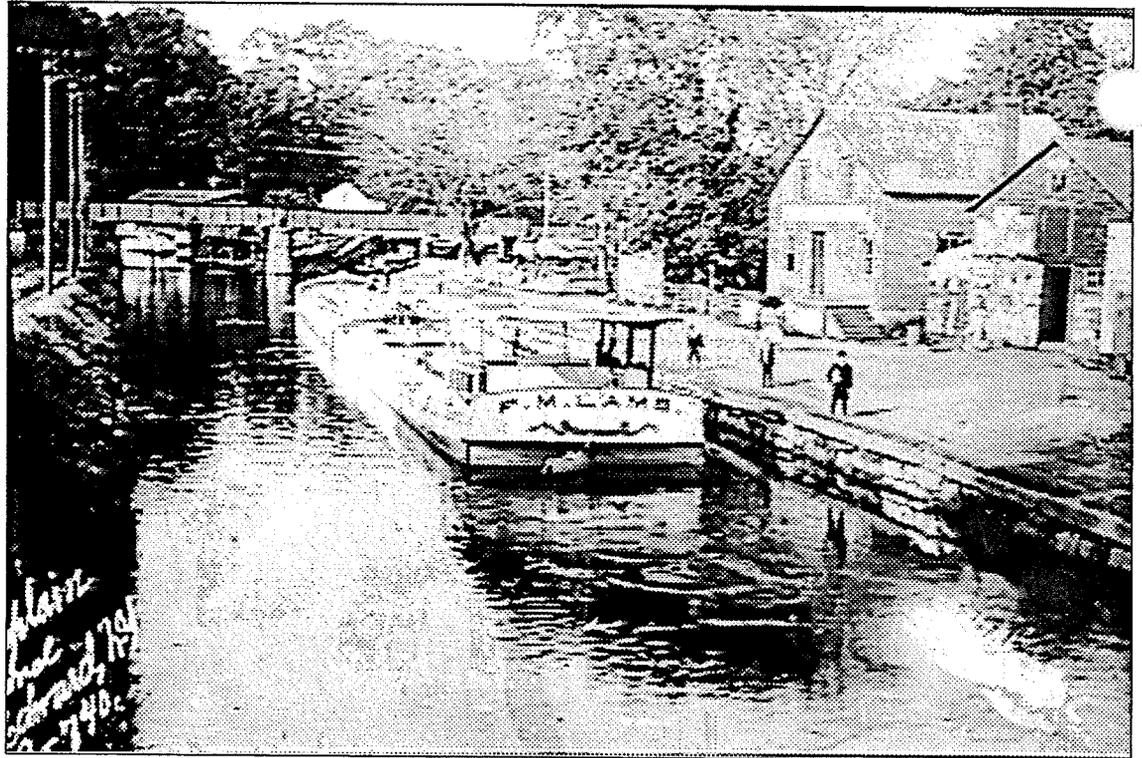
Erie Canal

*Credit:
NYS Canal Society*



**Fort Edward at historic
Lock 15, Champlain
Canal**

*Credit:
NYS Canal Society*



Historic Photographs

Beyer Blinder Belle Consortium

Exhibit 3-2