

THE VIEW FROM BLAKE MOUNTAIN: AN EARLY INDUSTRIAL ECOSYSTEM

Jamie Eves

Also see...

A Gneiss Prospect: Shaping an Early Industrial Ecosystem in Connecticut's Lower Willimantic River Valley, 1820-1920,

a PowerPoint presentation on how both environment and industrial history helped shape eastern Connecticut. **GNEISS-PROSPECT**

An elegant 1882 panoramic lithograph – Willimantic, Conn., 1882: From Blake Mountain – depicts the industrial city of Willimantic, Connecticut, as it appeared in the late 1800s after more than a half-century of industrial growth and development. Panoramics, which showed towns and cities as they would have appeared from a mountaintop or a hot air balloon, were quite popular in the late 1800s and early 1900s; publishers sold them locally to townspeople by subscription. This one was most likely a commemorative celebrating the completion of the Willimantic Linen Company's Mill No. 4, which is shown in an inset near the top of the lithograph. Until 1938 Mill No. 4, a modern, electrified structure, boasted the largest ground footprint in the world, and in its day was considered a showpiece of industrial architecture.



Willimantic, Conn., 1882: From Blake Mountain, a panoramic (or birds' eye view) of Willimantic, Connecticut, an industrial city in the town of Windham, CT. The lithograph clearly shows the city surrounded by truck farms and hayfields, evidence that it was an "organic city." The smokestacks show that coal-powered steam boilers had been added to supplement the waterpower of the Willimantic River — and the air, as well as the water, was being polluted. Each smokestack represents a different mill building.

From the collections of the Windham Textile and History Museum.

The lithograph is a superb illustration of an early industrial ecosystem, showing the following elements.

Truck farms. In an age before refrigerators, much of the food consumed by the factory workers and other residents of Willimantic had to be produced locally by truck farmers. During the 1800s the

forest that formerly had characterized most of Willimantic was felled to create fields for the truck farmers. This lithograph clearly shows these truck farms surrounding the city, vital parts of the early industrial ecosystem.

Organic cities. Many early industrial cities, such as Willimantic, were what historians call “organic cities” – places whose residents grew some of their own table vegetables, raised some livestock (cows, pigs, chickens), and used horses and oxen for transportation and muscle power. As a result, these cities had more domestic animals than they had people.

Organic conveyor belts. In addition to food for the human residents, the truck farmers also raised hay and grain as animal feed. In return, they collected manure from the city’s barns to spread on their fields – an exchange that one historian calls an “organic conveyor belt,” with food for people and animals going into the city and garbage and manure moving out. (The advent of sewers and refrigerated railroad cars at the end of the 1800s and beginning of the 1900s would upset this system.)

Rivers. Early factories were erected alongside rivers, which provided waterpower. Over the course of about a mile, the Willimantic River drops about 90 feet as it rushes through a rocky gorge. This seemingly abundant waterpower attracted several factories: the Willimantic Linen Company (later the American Thread Company), the Smithville Manufacturing Company, the Windham Cotton Manufacturing Company, and others.



This dam on the Willimantic River at Willimantic channeled water from the river into a raceway. From the collections of the Windham Textile and History Museum.

Dams, raceways, and declining fish stocks. In order to utilize this power source factory owners erected six dams along the mile-long Willimantic gorge, all of which diverted water into wide, deep, stone-lined, canal-like raceways that carried it under the mill buildings to turn the large water wheels which powered the mills. The dams, however, interfered with fish migration patterns, leading to a massive, but not complete, die-off of fish in the river. The remaining fish were killed

when leftover dye from the factory dye houses was dumped into the river, contaminating their environment.

Tall, narrow factories with big windows. In Willimantic, factory owners used local rock quarried from building the dams and raceways to construct mill buildings. At first, the mills were located directly along the river (for waterpower), were tall (two-to-four stories) and narrow with plenty of large windows – all to give workers enough light to work by in an era before electricity when lamps and candles brought risks of fires. It was only after electricity was introduced that wide, one-story buildings like Mill No. 4 be erected. In Willimantic, the earliest mills were located near the base of the gorge, where the water power was greatest, on former cedar swamps that were filled in with gravel and stone dug out of the surrounding hills.

Coal smoke. By the 1880s the waterpower of the Willimantic River, which had seemed so abundant, had become insufficient to drive the ever-expanding mills. Most mills now supplemented their old waterpower with coal-powered steam boilers. Air pollution in the form of coal smoke is clearly visible in the lithograph.

Railroads and wagon roads. Millers shipped in cotton from the U. S. South, at first by boat to Norwich, CT, or Providence, RI, and then by wagon road to the mills. Wagons and boats then delivered finished thread and cloth to distant markets. In the 1840s, however, the railroad arrived in Willimantic, replacing the wagon roads as the chief means of transporting goods in bulk.

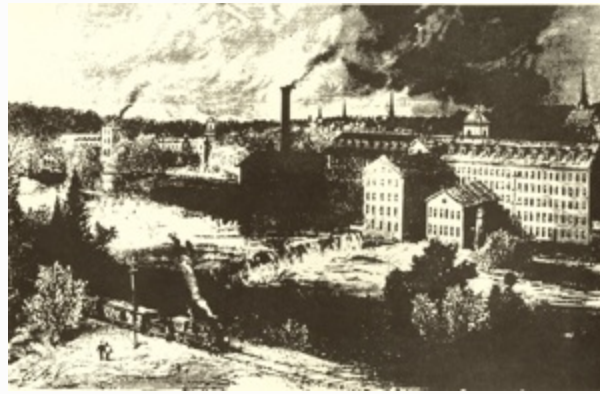
Urban centers. As the mills grew, workers flooded into Willimantic seeking employment. Mill owners constructed company housing (boardinghouses and tenements) for many of their workers; many of the tenements were built on reclaimed wetlands filled with gravel quarried from nearby Carey Hill. The mill owners also opened company stores to provide workers with groceries and dry goods. The Willimantic Linen Company even sponsored a credit union for its workers, and opened a combination library-classroom-chapel on the third floor of its company store building. This building is shown in the lithograph. Around the same time, other businesses and services sprang up as well – a Main Street and side streets offered shops, stores, hotels, restaurants, saloons, newspapers, opera houses, churches, schools, a hospital, and even a college. As the lithograph shows, by the 1880s this early industrial city of several thousand people stretched along both banks of the mile-long gorge, with side streets running up into the surrounding hills.



This stone barn was built in 1866 to house draft animals used by the Willimantic Linen Company in Willimantic, Connecticut. Draft animals like horses, mules, and oxen carried heavy loads through the mill yard, and — utilizing block and tackle — hoisted heavy loads onto upper floors of mill buildings. The presence of draft animals was one of the factors that made mill cities organic cities. From the collections of the Windham Textile and History Museum. Photo by Stephanie Conforti.



The Willimantic Linen Company's Mill No. 2 in Willimantic, Connecticut, built of stone quarried from the digging out the mill's dams and raceways — and from a quarry on Main Street in Willimantic. This structure was built 1864-70. The characteristic shape — tall, narrow, with large windows — identifies it as having been built before electric lights, when the only illumination was natural sunlight. The tower acted as a stanchion for hauling heavy materials onto upper floors. Watercolor painting by A. N. Wyeth. From the collections of the Windham Textile and History Museum.



Industrialization meant air and water pollution, as shown in this c. 1900 illustration of the Willimantic Linen Company in Willimantic, Connecticut. From the collections of the Windham Textile and History Museum.



Mill owners channeled water from rivers into raceways, which carried it to power the early mills. This is the Wauregan Mills in Wauregan, Connecticut, a mill village in the town of Plainfield, in c. 1950. From the collections of the Windham Textile and History Museum.



This raceway — long abandoned and now overgrown with brush and forest — once carried water from the Willimantic River to power the Willimantic Linen Company's Mill No. 3, which was demolished in 1926. The dam that diverted the water washed away years ago, but following rainstorms the raceway still fills with water. The sides were lined with stone to retard erosion and keep the water confined to the raceway. This raceway is about 20 feet wide and 10 feet deep. From the collections of the Windham Textile and History Museum. Photo by Jamie Eves.



The same raceway, empty of water. From the collection of the Windham Textile and History Museum. Photo by Stephanie Conforti.