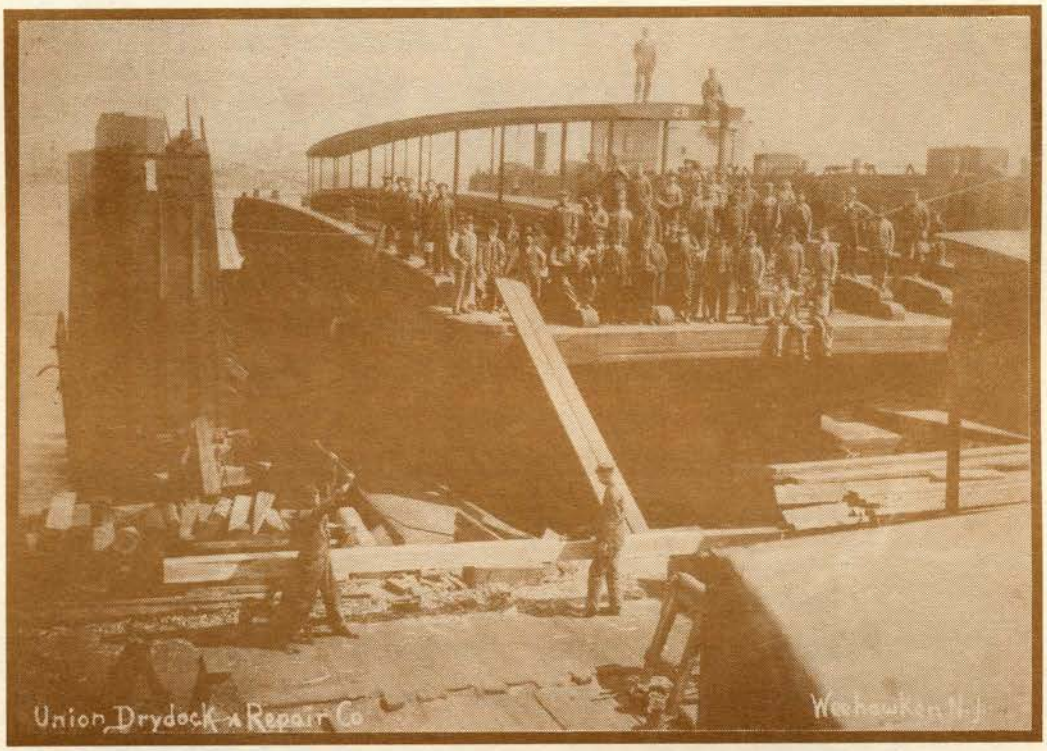
THE LIGHTERAGE SYSTEM IN THE NEW YORK / NEW JERSEY HARBOR



A Publication of
The Hudson Waterfront Museum
in Conjunction with the Exhibition
on the Lehigh Valley Covered Barge #79

Liberty State Park, Jersey City, New Jersey

July 1992

Cover Photo:

ShipYard Workers

Photograph, circa 1910, shows ship yard workers of the Union Dry Dock & Repair Company, which was headquartered at the time in Weehawken, New Jersey. Presently located in Hoboken, New Jersey, Union Dry Dock has been in continuous operation since 1908.

Union Dry Dock was an integral part of the lighterage system, servicing maritime equipment in the New York/New Jersey harbor. As New Jersey's only dry dock facility, Union Dry Dock still employs approximately 100 workers, many of them Hudson County residents.

The Hudson Waterfront Museum

presents

THE LIGHTERAGE SYSTEM IN THE NEW YORK / NEW JERSEY HARBOR

Curated by

Robert Foster and Jane Steuerwald

Presented on the Lehigh Valley Covered Barge #79
Liberty State Park
Jersey City, New Jersey

July 1992

This exhibition and publication have been made possible through generous funding by the New Jersey Historical Commission.

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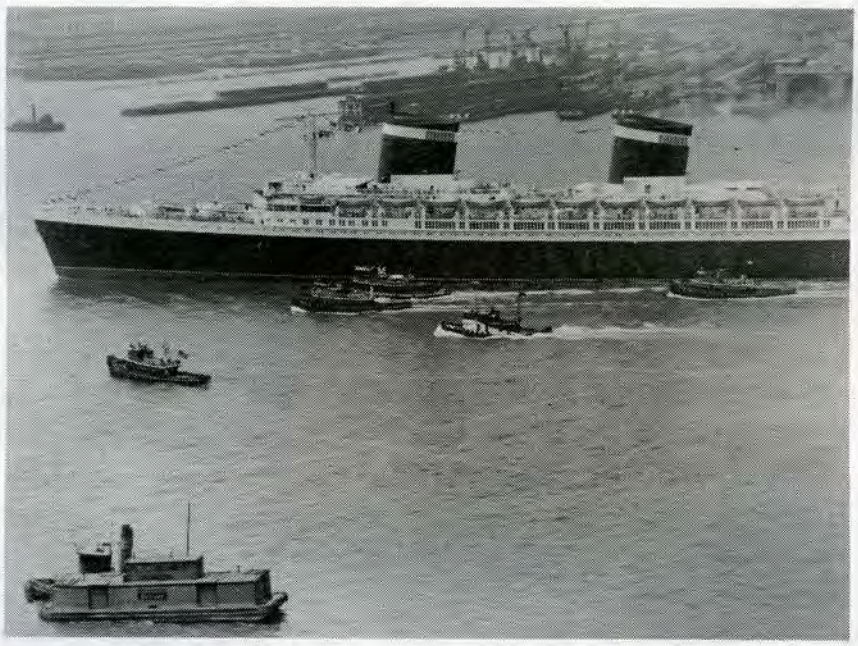
Following is a series of articles written by the curators, Robert Foster and Jane Steuerwald, providing a more in-depth look at the lighterage system. Included in the text are comments by deckhands, tug captains, a barge captain, and other maritime workers that participated in this oral history project.

The Hudson River

"Between 1910 and 1960 New York and New Jersey made up one of the leading ports in the world."



As you look out over the Hudson River today, you still may see an occasional tugboat pushing a barge up river, a tanker moving slowly through the water or an ocean liner bound for the islands pulling out of port.

But only a few decades ago the waters and the piers along the New Jersey side of the Hudson were swarming with activity. Boats often had to wait nearly two hours just to unload their freight. Between the ferry boats moving passengers back and forth across the river, the railroad carfloats transporting freight, and the tugboats each sounding their own individual steam whistles, the harbor looked and sounded like a traffic jam in midtown Manhattan.

Between 1910 and 1960, New York and New Jersey made up one of the leading ports in the world. As cargo and immigrants sailed in from the Atlantic on oceanliners, freight was transported across the harbor on barges and lighters, and people crossed the river on ferries to connect with thirteen different railroad

lines on the New Jersey side of the Hudson.

"I used to go down and sit on the docks late at night, before I was due to go on duty, and just listen to those tugboat whistles. Calling back and forth up the harbor. You knew from the sound of the whistle what boat it was. At that time, there were 750 tugs in New York Harbor. Each whistle had a different sound to it. No two Lackawanna boats sounded the same. There was a whole system of code signals by whistle before the days of radio." - Jack Quimby, oiler and engineer, Lackawanna Railroad marine division.

At the harbor's peak the Pennsylvania Railroad alone had more than 500 hulls in the water and there were several thousand boats in the harbor. Many of the ships lining the New Jersey side of the Hudson were ocean liners. The history of her docks and piers would not be complete without the great ships that docked there.

In the early days, the 1880's until about 1910, most of the ships were German. The Hamburg-Amerika Line and North German Lloyd dominated the trans-atlantic traffic and owned docks up and down the river side of Hoboken. But when World War I erupted, the German-owned docks and piers were seized and locked. The German ships were eventually replaced by another great shipping company, The Holland-America Line. From 1910 through 1963 this major trans-atlantic steamship company docked in Hoboken and in 1947 they bought the property making them the only major transatlantic steamship company to own its own terminal in the port.

The river itself, in spite of its geography affecting a natural port, can be extremely hazardous. At its peak one of the hazards for vessels involved in lighterage was the continuous traffic. But congestion alone was not the only hazard. Harsh winters and tricky tides could also add to the problems encountered by tugboats, ferries, and carfloats.

"In New York Harbor, you have an ebb and flow of tide. A flood tide. On certain piers, you can't land with the tide, you've got to go against the tide. The other way it'll just push you down the river. It's scary when I think of it now. In the wintertime, in ice and snow, these barges only had about a foot wide walkway around, and if you slipped off, you had it. You had to be very relaxed. You had to be ready to grab or drop, or you'd get knocked over the side.

What made it interesting and nerve wracking was that you had to know your tides. It was quite a bit of manual work if you happened to be working locally, but when you got a tow going to Staten Island or Port Newark, it'd take about two hours. Then you had time to relax. But you had to work like heck before that to get your tow made up and all your barges lashed together.

The main thing was, you never went to the same place twice or saw the same thing. You'd do every job different every time. New York Harbor is so interesting. I've been up and down past the Statue of Liberty every day and it just looks different every time you go. Now it's nothing, but years ago something was moving, going across or up and down constantly. It was really challenging and fascinating." - Hollis Maupin, deckhand, Erie Railroad marine division.

The Lighterage System

"The term lighter originally referred to vessels used to lighten the load of ships attempting to dock in shallow waters."

America was once moved by freight. Railroad tracks crisscrossed the country, with many of the great railroads beginning and ending at terminals on the New Jersey side of the Hudson River.

Because the geography of New York Harbor dictated that it was more suitable for terminals to be situated on the banks of New Jersey, a system for moving freight back and forth across the Hudson became necessary.

Such a system was developed and it became known as *lighterage*. The term *lighter* originally referred to vessels used to *lighten the load* of ships attempting to dock in shallow waters.

Of course there were many types of marine equipment moving back and forth across the harbor at one time. Car floats and barges moved enormous amounts of freight - some car floats could accommodate rail cars back to back for up to three hundred feet and could line cars up next to each other three tracks abreast. These particular car floats

were known as *transfer car floats. Station floats* had a platform in the middle of two tracks and allowed freight to be moved from one car to another while the railcars stayed on the float.

Almost none of this marine equipment could get anywhere under its own steam. The only lighterage equipment that was self-propelled was an occasional barge delivering mail. Most everything in the harbor would have been dead in the water without tugboats. The tugs pushed, pulled, and maneuvered - they were the heartbeat of the lighterage system, with each rail line from Erie, to Pennsylvania Central, to New York Central operating its own fleet of tugs.

The lighterage system was swift and efficient - a virtual boon to the shipping industry. Because the railroad companies absorbed the additional costs of lighterage, the shippers stayed happy but eventually the cost to the railroads became prohibitive. Expenses for the lighterage system continued to climb as the volume of cargo decreased. Trucking and container ships quickly moved in and the railroads could no longer compete.

A system of moving cargo that at one time consisted of float bridges, car floats, tugboats, ferries, and barges - more than 2500 pieces of marine equipment chugging back and forth across the Hudson River - has virtually disappeared. Both the New York and New Jersey banks of the Hudson are no longer ports for lighterage - the river banks are now lined with vacant piers, abandoned float bridges, and empty marine terminals.

Railroads and the Lighterage System

"At the harbor's peak, the Pennsylvania Railroad alone had more than 500 hulls, and there were several thousand boats in the harbor."

The Port of New York and New Jersey is one of the best deep-water ports in the world. This geographical asset for shipping presented a major problem for railroading - the link between cargos and their destinations across the United States was virtually interrupted by the Hudson River.

Unlike most world ports where railroads could transport goods directly to the berths of large vessels, all but one railroad company, New York Central, had terminals ending on the New Jersey side of the Hudson. Accordingly, the lighterage system was developed for transferring cargo, so goods could pass through to cargo ships for passage across the Atlantic.

This efficient movement of goods across the Hudson was provided by the railroads free of charge to their clients, at first to compete with canal boats, and later to keep the port a viable destination for shippers. By the 1920's each railroad

company owned a significant piece of property in the form of terminals in New York and New Jersey and were forced to protect their investments by providing free lighterage.

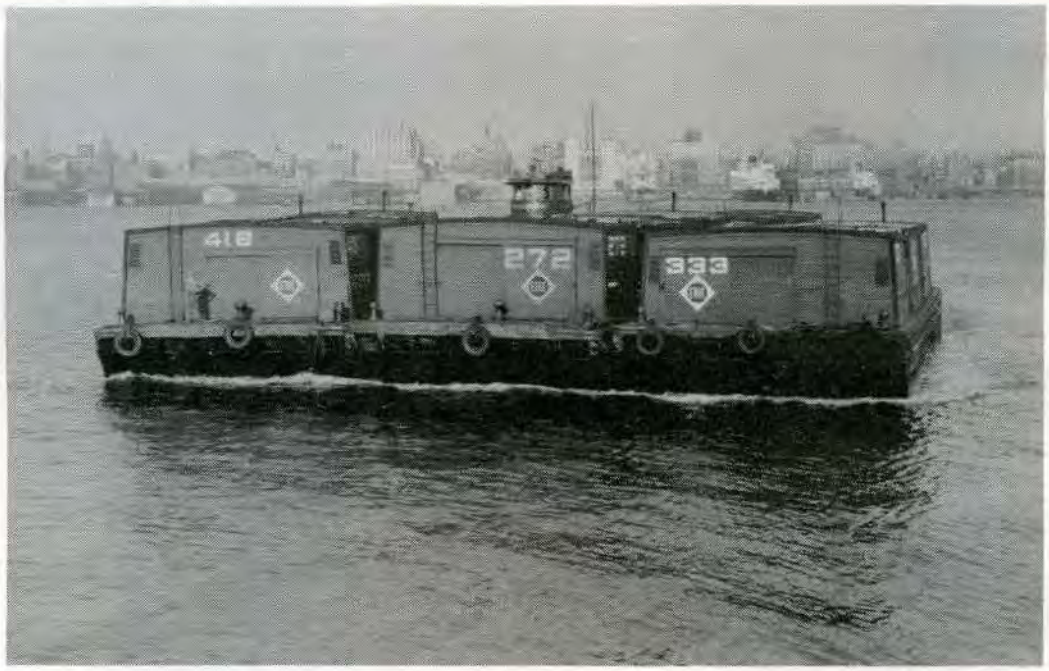
There were freight terminals in Weehawken, Hoboken and Jersey City, New Jersey. On the west side of Manhattan there were piers on Barclay Street, 33rd Street, and 60th Street. Even New York Central developed facilities on the New Jersey side of the Hudson to handle freight that had to cross the river.

At the harbor's peak, the Pennsylvania Railroad alone had more than 500 hulls, and there were several thousand boats in the harbor. In Greenville, New Jersey, the Pennsylvania Railroad, and the New Haven Railroad owned property. At Pavonia Avenue in Jersey City, was once the Erie Railroad shipyard and marine department, and the New York Central Railroad moved goods to terminals in Williamsburgh, Brooklyn and Port Morris in the Bronx.

Increased expenses for lighterage and the steady increase in trucking for the movement of cargo combined to spell the end of the railroads' involvement in this century old system of moving freight back and forth across the Hudson. By the mid 1970's Erie was the last railroad operating a transfer tug and a carfloat in the water, and in 1975 Erie's tugboat *Elmira* made its last trip across the river from New Jersey to Manhattan.

Vessels in the Harbor

"The movement of cargo back and forth across the river was accomplished with lighters - vessels used to carry freight between destinations in New York and New Jersey, or between an ocean vessel and a pier."



At one time, there was an extraordinary number of boats afloat in the Hudson River. From the majestic ocean liners to the raucous *junk boats*, the sheer magnitude of vessels was amazing. The movement of cargo back and forth across the river was accomplished with *lighters* - vessels used to carry freight between destinations in New York and New Jersey, or between an ocean vessel and a pier. Barges and scows, transfer carfloats and station car floats, derrick lighters, ferries and tugboats all worked together in this waterfront choreography.

Most of the floating equipment could not move under its own steam, and had to be shifted with lighterage tugboats. Most of these tugs evolved into a form that was relatively long and narrow, with a deckhouse to match and windows all around the wheel house. The transfer tugs were the largest and were capable of moving the transfer car floats loaded

with rail cars three abreast and 300 feet back to back because their higher wheelhouses provided the captain and mate with better visibility.

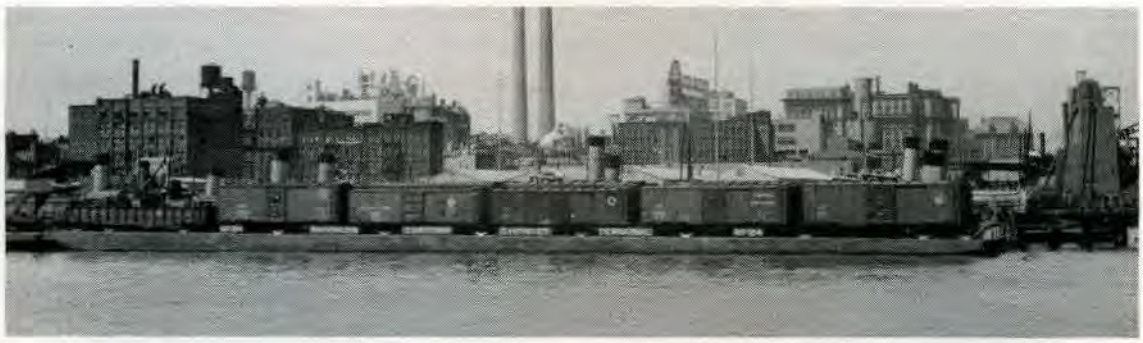
A smaller tug was important too, for moving barges around within a small area in a terminal. These tugs known as shifting tugs or drill tugs were significantly smaller than the transfer tugs measuring about 70 feet to a transfer tug's 110 feet in length.

The station car floats or *terminal floats*, had platforms in the middle of two tracks and allowed freight to be moved from one car to another while the railcars stayed on the float itself. There was a roof over the middle platform for protection from the elements, and they were usually docked so the end of the platform was lined up with a warehouse door.

Barges also came in many varieties. Hold barges carried bulk cargo such as coal and grain. Open deck scows could carry materials that needed minimal protection such as ingots of copper and bales of rubber. Covered barges carried cargo that needed special protection from the elements. They were refrigerated when they carried bananas, with large ice bins at each end of the covered shed. When moisture was a problem, a stove was located at the center of the shed and surrounded with an iron cage to protect the cargo.

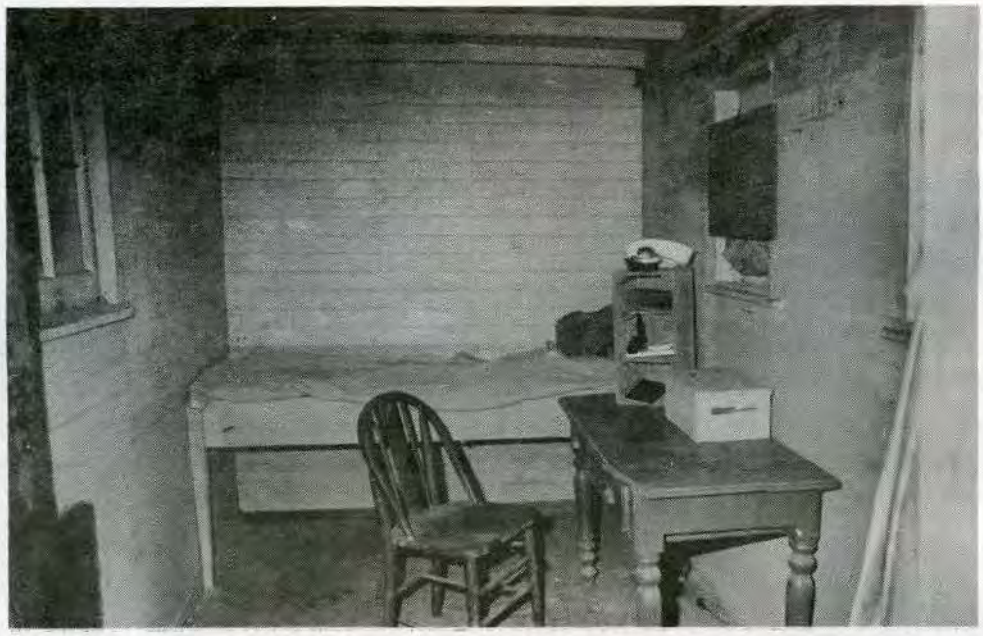
Derrick lighters or *stick lighters*, had a single mast and boom which was used to hoist cargo. These lighters were sometimes used to unload their own cargo, or goods from another barge or scow.

One of the more colorful craft in the harbor were known as junk boats... *"a gang of piratical entrepreneurs who would get a license from the City of New York. They were licensed to operate between sunrise and sunset ONLY, because they'd steal anything that wasn't nailed down. They had these raffish-looking boats with a gasoline or diesel engine like an open launch. They'd go around buying old rope and rags and rubber tires - only they weren't too fussy about where they 'bought' them."* - Jack Quimby, oiler and engineer, Lackawanna Railroad marine division.



Lehigh Valley Covered Barge #79

"Barge operation was particularly appealing to immigrant families. There was no rent to pay and the railroad provided coal for the stove and kerosene for the lamps."



The Lehigh Valley Railroad Covered Barge #79 is an example of the final generation of covered wooden barges. Its proportions, doors, and the type of flooring used, suggest that it was built sometime after the 1890's when these details were standard features in covered barge construction. Barge #79 is listed on the National Historic Register as having been built in 1914 by the Perth Amboy Drydock Company, New Jersey, for the Lehigh Valley Railroad.

It has a hull with a flat bottom, square ends, vertical sides and a bow and stern angled at about 45 degrees. Its deckhouse has slightly angled sides and an arched roof. There are two doors on either side with corresponding hatches cut into the roof to allow vertical hoisting of freight. The decks are short at both bow and stern, and there are very narrow ledges at either side.

This Lehigh Valley barge stowed cargo

on the main deck. Its deckhouse is eleven feet, seven inches at the center, and eleven feet one inch at the sides. The walls are relatively light in construction with five inch wide, three-quarter inch tongue and groove boards laid horizontally over four inch by four inch studs.

The cabin that provided living quarters for the barge captain is located at the aft end of the deckhouse. The furnishings still remaining are a table and stool, a closet, a berth and mattress, and a shelf. It has a single door on the port side, two windows in the aft bulkhead opening to the outside, and one in the forward bulkhead, opening into the main cargo space. There is galvanized iron on the center of the forward bulkhead and a fitting for a smokestack in the ceiling above, which suggest where the stove was located. The barge exterior was painted a dark red-brown with the identifying number 79 painted white.

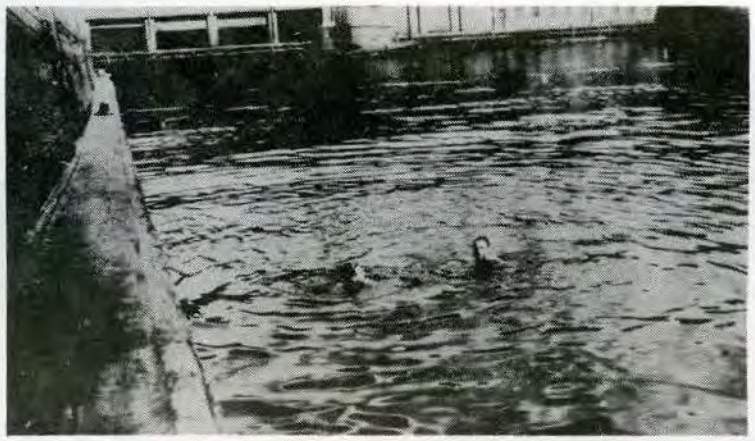
NO SMOKING and *SAFETY FIRST* is stenciled in white letters on interior bulkheads, cargo battens, and roof supports.

Barge operation was particularly appealing to immigrant families. There was no rent to pay and the railroad provided coal for the stove and kerosene for the lamps. Cargo that spilled - rice, coffee, sugar, flour and spices - could be salvaged and bartered with other barges. Many companies preferred captains with families to live on board, because they were more apt to take pride in their vessels.

The Lehigh Valley Railroad Barge #79 is an authentic artifact from the era of railroad lighterage in the New York/New Jersey Harbor. In the year she was built, New York had been the largest seaport in America for almost a century, and would soon become the largest seaport in the world.

Memories of a Barge Captain

"For relaxation there were rafts we would use that would be hooked up between the barges and the piers. Families from different boats would get together and have little picnics on these rafts, and they would swim and crab and fish."



My father was a barge captain. It was a demanding job. There were times that cargo would require heat, so he would have to keep a stove going in the freight house to keep the cargo warm. Sometimes the cargo needed refrigeration, and the barge had an area that had to be loaded with ice.

I remember my father made flower boxes and shutters for the cabin windows. He was quite a carpenter. He made all the furniture for the rooms, the cabinets for the kitchen, and he kept the boat in good repair himself. My father also made swings in the freight house. While the boat was empty we would play on the swings, and when it was time to load the boats, he would tie the swings up.

For relaxation there were rafts we would use that would be hooked up between the barges and the piers. Families from different boats would get together and

have little picnics on these rafts, and they would swim and crab and fish.

When I was eighteen, in 1947, I started on the barges. I always associated certain smells with my childhood - like the scent of oakum and the ropes on the boats. You could get a job with the railroad through family. I decided that I'd like to try it so I went down and applied and got the job of barge captain.

A barge captain didn't necessarily have a pilot's license. Barges were not self-driven, tugs had to take them everywhere. *Barge captain* meant you took care of the safety of the vessel. I would clean up the boat, check the safety lines, check the hatches. I checked the cargo on and off, made manifests, and kept logs. I guess the major change, from my father's day, was the amount of hours you had to work, and the pay. In the winter, it wasn't the nicest job in the world - you were out in all kinds of bad weather. But on a nice day, once you got caught up with your paperwork, it was a great job. - Jim O'Day, Barge Captain

Cross Harbor Railroad

"The Cross Harbor Railroad is a company that operates the last remaining barge service connecting Conrail's freight service in New Jersey with the Brooklyn rail yards."

The Cross Harbor Railroad is a company that operates the last remaining barge service connecting Conrail's freight service in New Jersey with the Brooklyn rail yards. It is the only company in the harbor involved in the lighterage system.

It operates with diesel-electric locomotives, 10 miles of track, six car floats and two tugboats. It's carfloats eliminate the need for trains to take a roundabout route near Albany through Selkirk, and back to Brooklyn for connections with the Long Island Railroad.

Although the economics of cargo shipping in the port began changing over thirty years ago, Cross Harbor offers an alternate route for companies to move their containers for shipping. They can avoid the roundabout railway route, and move their containerized goods directly across the harbor.

"Containerization took a lot of railroad work

away. Everything is concentrated now: Port Newark, Elizabethport, Red Hook Terminal. When you go in volume, as in years back, it was called bulk cargo. With containerization, from its origin it's placed in a container and it's never handled again until it gets to its destination. So that did away with most of the railroad work. They claim that the volume of shipping is the same. The volume might be the same tonnage-wise, but it's all concentrated in containers, and it's one dump. one pickup, and that's it. The jobs are gone because of the lack of multiple handling." - Sal Notarile, first class pilot and master.

Cross Harbor's goal is to use the harbor system again to take more of the burden off Hudson River crossings, and to provide alternatives to trucking and containerization that are more energy efficient, economically efficient, and environmentally efficient.

Maintenance

"I think once anybody's connected with a shipyard, he will always be a shipyard man regardless. Anybody who ever worked in a yard will have a lifetime interest of some sort in it."

Since the repair and maintenance of marine equipment was critical to the smooth operation of the lighterage system, some of the railroads had their own yards, drydocks, and facilities to repair, rebuild, or redesign their floating equipment.

The Erie Railroad, for example, had an enormous facility in Jersey City, on Pavonia Avenue. On one side was the railroad terminal itself, running trains to destinations like Columbus, Ohio and Chicago, Illinois.

On the other side were two freight yards and a marine yard where all the floating equipment was taken care of. In the early part of the 20th century, wood was king. The float bridges, the lighters, and the car floats were all made of wood - providing employment for many hundred skilled carpenters.

The Erie marine yard had *self-contained* shops. There was a plate shop where all

the iron work was done, a machine shop, a carpenter shop where they could handle hugh beams for oak decking, and a paint shop with gallons and gallons of paint that the railroads used on all their equipment.

Owning their own drydock allowed the railroad to accomplish major repairs as well. Erie's drydock was capable of picking a 400-ton tugboat out of the water and blocking it up so men could wash it, do any necessary iron work, and paint it below the water line.

Drydocks were owned and operated by a number of other companies as well, and typical drydock repairs are still sandblasting, replacing steel plates, and painting.

Since the early part of the century the business of marine maintenance has changed quite a bit. Before World War II there were over 120 lighterage and towing companies in New York Harbor. One drydock company, Union Dry Dock, has been in business since October of 1908 and has seen many of these changes. At one time the railroad business made up about 40% of Union Dry Dock's yard work. Every railroad had a terminal on the New Jersey side of the Hudson and Union Dry Dock serviced the New York Central, the Pennsylvania, Erie-Lackawanna, B & O, and the Central Railroad of New Jersey. As it became more difficult and costly for companies like Erie to maintain their own yards and drydocks, commercial companies like Union Dry Dock took over.

Another major change in the industry was the move from wood to steel. Prior to World War II most floating equipment in the harbor was of wooden construction. But during and after the war the yellow pine and oak that had been commonplace was no longer available and became far too expensive to purchase. As steel moved in, companies like Bethlehem Steel were formed to fill the need on a large scale. Bethlehem had the steel available from mills at a cheaper price than anyone else, and their success was capped by the building of their own shipyard in Hoboken, New Jersey.

"I think once anybody's connected with a shipyard, he will always be a shipyard man regardless. Anybody who ever worked in a yard will have a lifetime interest of some sort in it. Anything that floats and is a vessel would be an item for that person to look at and inspect and speculate about - her seaworthiness and so on. The smell of the drydock, you know - it's a peculiar thing. In the olden days, when they still had the wooden boats and the caulking, you smelled the pitch and oakum in particular. That sort of gets into your system." - George Dryer, former president, Union Dry Dock & Repair Company.

Workers and Their Jobs

"It was a good job. I liked it very much. Everybody helped each other out. There was a lot of camaraderie aboard the ship. The oiler helped the fireman, the fireman helped the oiler. Everyone knew his business."

There were many and varied jobs generated by the lighterage system in the harbor. Barge captains, longshoremen, engineers, oilers, mates, pilots, woodworkers, metal workers, floatsmen - all had a part in moving freight from one side of the river bank to the other.

Some were working for private companies like the Meseck Towing Line, some were railroaders and worked in one of the many capacities necessary for the railroads' lighterage business to operate. Some worked for related industries like the Soborg Woodworking Company carving eagles for tugboats, or for a company like Union Dry Dock in Hoboken - cleaning, painting and maintaining marine equipment.

The jobs generated by the railroads are of particular interest since so many railroad companies were involved in their own maintenance. The Erie

Railroad alone had an enormous maintenance facility on Pavonia Avenue in Jersey City.

"The railroad, say from the thirties through the sixties, was a real going thing. In our place here in Jersey City, on Pavonia Avenue, were huge facilities. On one side was the railroad terminal - they had twelve to fourteen tracks. They ran to Chicago and they had two freight yards, the north and the south.

In the south yard the railroad had a facility known as the marine yard. In the marine yard they took care of all the wooden floating equipment, the steel floating equipment, and the wooden barges. The railroads had self-contained shops, such as the plate shop. If there was any iron work to be done, skilled men were there with facilities, equipment, plate rollers, welding, burning - the latest equipment. If the job was too big, or the iron work was too complicated or below the water line, we had a dry dock which was capable of picking up a 400-ton tugboat. Picking it up out of the water so that men could wash it, paint it, and do the necessary iron work below the water line." - Frank Karton, Erie Railroad marine maintenance division.

Back then, the shoreline was the hub of transportation and commerce. It was a place for straining muscles and earning a living. Many times whole families worked together for the same company, or at least in similar occupations. Generation after generation worked for the railroads, where seniority was everything. On railroad tugs a worker could start out as a fireman, work his way up to oiler, and perhaps eventually make it to engineer.

"When you're a junior you have to stand by for orders. So we wouldn't go home, we'd just sleep at the 'Y'. Now Hoboken wasn't known for the luxuriousness of it's overnight accommodations, but this one had to be the pits. We didn't rent a room because the rooms were terribly filthy. The dust was actually three inches thick in the 'Y' rooms. In the summertime we'd sleep on the barges rather than go up there.

It was so bad that I would sleep on a leather 'bronco' - like a leather sofa - and watch Jackie Gleason till about midnight and then pass out 'till four in the morning. Then the call boy would wake you up to go down to start the engines and clean the boilers.

It was a good job. I liked it very much. Everybody helped each other out. There was a lot of camaraderie aboard the ship. The oiler helped the fireman, the fireman helped the oiler. Everyone knew his business." - Jack Quimby, oiler and engineer, Lackawanna Railroad marine division.

An Interview with Jack Quimby

"The best parts were the camaraderie and seeing the moving machinery. The smell of the oil and coal and everything else."

My name is Jack Quimby, and I started with the Delaware Lackawanna Invested Railroad in May of 1951 as a fireman on their tugs. I worked on the railroad ferries until the final trip, Thanksgiving evening, November 1967.

The tugboats had three furnace boilers, scotch boilers - about 150 pounds pressure. The boats had been built around 1901 to 1903, so they weren't too new at the time. They had two, three, or four furnaces. The *Bronx* was the biggest one - it had four furnaces of one thousand horsepower. It carried two of what they called *Broadway car floats* with twenty-one cars apiece, up to the Harlem transfer on the Harlem River.

Most people think that to build a coa fire you just pour in the coal. Well sooner or later, the furnace becam chock-full of ashes. So you had to rear the fires and pull the ashes out with as hoes, one at a time. You were fightin the clock and the steam pressure gaug at the same time. Meantime, th engineer was screaming down the hat

at you to keep the pressure up. It got rather entertaining, but when you're twenty years old you don't worry about that.

I started as a coal passer - a fireman. You bailed about a ton of coal an hour, and then you'd rake out the ashes - about a third of the weight - on the hour. It was quite a job. They called me *fireboy* even after I got to be twenty-five and had a family of three children.

My father taught me something about steam engines. He was an engineer, so maybe I had an edge on the rest of the gang. I graduated to oiler because I had mechanical ability.

Everything was seniority on the railroads. As far as I know, from my experience on tugboats, you were rated solely on your capacity for doing your job. The rest didn't count a hoot for shinola. I think that was a pretty democratic way of doing it.

It's a way of life that's totally gone today. There were good parts of it and there were rough parts of it like anything else, but I rather enjoyed it. The best parts were the camaraderie and seeing the moving machinery. The smell of the oil and coal and everything else. The fact is, you're young and you're strong, and you think: Wow, this is the life!

An Interview with Sal Notarile

"In the old-time railroad, there were whistle signals. It was constant communication by whistle."

My name is Salvatore William Notarile. I've been in this business since July 10, 1952. I hold a first class pilot's license and a master's license.

When I was a child, I used to see tugboats. I'd be going over the Manhattan Bridge by subway, looking down with my father, and say *"Why don't I get a job on a boat like that?"* I was a little boy. And lo and behold, eventually I had the opportunity to be hired.

On the Erie, we had twelve boats. We had about 36 crews when I first started out in '52, and we were considered small compared to the New York Central and the Pennsylvania. In the old-time railroad, there were whistle signals. It was constant communication by whistle. We used hand signals when the crew was in view, but when we had ten, eleven, or twelve barges grouped together, and made up with lines in between, you were obscured from the crew, and all the signals were whistles.

I knew I wanted to become a captain.

Everybody does. Everyone on deck wants to. Most people wouldn't admit it: *"Oh, I don't want to be bothered; it's too much responsibility..."* But everybody wants that license, that's for sure. When I stood for my first class pilot's license, you had to be sponsored by two captains with a letter from the company. It was a written examination that took five days and you had to maintain ninety percent. They'd give you five questions at a time and they wouldn't waste your time or their time. They could tell if you maintained a ninety percent level. If not, they'd stop you right then and there and say: *"Come back in thirty days."* And that's what happened to many people. It discouraged them from coming back after thirty days, or discouraged them from getting their license. I've seen people who had the mental ability to pass any examination, but whatever held them back, I don't know. Maybe they never wanted to face the responsibility of the boat.

We're a one-crew outfit now, but in years back, in a twenty-four hour day, you had three crews aboard. We carried anything and everything, including livestock. We used to take carloads of cattle and sheep right from the Erie Railroad in Jersey City over to Hunter's Point, to the Long Island Railroad. We used to have a General Motors contract where we had complete automobiles, side view mirrors and all, encased. Typical cargo now, cross harbor, is newsprint, bricks, lumber, oil, syrups.

I miss the old crews, the old railroaders. It's a whole different breed of people, the railroad people versus outside marine people. Not being prejudiced, but I don't think you'd find a better deckhand than a railroad deckhand. The volume of work he does within eight hours, an outsider wouldn't do in a week. As far as work is concerned, and as far as marine knowledge, he has it all over an outside marine man, as far as I'm concerned. You can't beat a railroader.

Maritime Tools

As in all industries, there are many tools that are specific to the trade. The maritime industry is no exception. Many tools have evolved over the years to accomplish both simple and complex tasks. The following tools were commonly used during the period of the lighterage system in the Port of New York and New Jersey.

Adz. Displayed here is a lining adz. It is used like an axe, but because of its shape, it creates a channel on timber.

Barge Shovel. Wooden shovel used for snow or cleaning up spilled cargo. This could include broken sacks of flour, sugar, grain, corn, potatoes, etc.

Bell and Gong Signal System. The three handles would be hooked up in the wheel house. The bells would be mounted in the engine room, and each signal told the crew a different command. The jingles, gongs and cowbell rings of the bell system were used in both the Steam and Diesel era.

Stop to dead slow ahead (a pilot's expression used when just enough power is wanted to keep the ship in position but not moving) -
1 bell, 2 jingles (pause) 3 jingles

Stop to slow (easy) ahead - 1 bell, 2 jingles

Stop to half ahead - 1 bell

Stop to full ahead - 1 bell, 1 jingle

Slow ahead to stop - 1 bell

Half ahead to stop - 1 bell

Full ahead to stop - 2 bells

Slow ahead to half ahead - 1 jingle, 1 bell

Half ahead to full ahead - 1 jingle

Stop to half astern - 2 bells

Half astern to stop - 1 bell

Half astern to full astern - 1 jingle

Full astern to stop - 1 bell

Astern to slow astern - 2 jingles

Full ahead to full astern - 4 bells, 1 jingle

Bow Fender. A tugboat fender wrapped around the bow of the tugboat to act as a bumper. The wooden pegs are called *fids*, a kind of giant *darning needle* used for weaving rope.

Canvas Water Bags. Stored water to be

used for scrubbing the barge, cooking, washing, etc.

Caulking Iron. Used to force cotton and oakum between seams.

Caulking Mallet. This tool was used to drive a caulking iron to force cotton and oakum down between the seams of a vessel to keep it water tight.

Caulking Tools and Stool. Caulking the seams of a wooden barge was a never-ending task. Usually it could be done at the shipyard but in case of emergency, tools were available. For caulking the decks, tar was used and the caulking stool brought you to the right level. For the seams, cotton was stuffed in followed by oakum and the caulking iron helped to fill any crack to the maximum. Oakum - made from hemp or jut fiber - swells when wet so as to seal the seams tightly.

Double Bits. Bits for securing lines are used on the decks of tugs to secure tows and to tie up to the dock or other vessels.

Longshoreman's Hooks. Used for hooking cargo - sacks of coffee, oats, grain, etc. Each stevedore had his own personal hook, the tool he showed up for work with each day. Some of the examples are hand forged.

Lothrop's Fog Horn. This hand-operated fog horn was used aboard the Erie-Lackawanna ferryboat *Elmira*.

Mankin Trophy. 1915 Sailing Trophy awarded by Commodore Frank Mankin to Captain Frank Totten, owner of the *Amaranth*. Trophy donated by Commodore Joey Harbowe of the Manhattan Yacht Club, Edgewater, NJ.

Model of an Open Deck Scow. This model was used in the courtroom to help illustrate the circumstances of accidents in workman's compensation cases. Circa 1930's.

Monkey's Fist. Type of knot used as a weight at the end of a heaving line. The heaving line was a thinner, lighter line than the bow or stern line and served as the preliminary link with the shore or another vessel. Attached to the heaving line was the heavy line (often 2" in diameter) used to tie the vessel up. The monkey's fist enabled the heaving line to be aimed at a certain point.

Peterborough Canoe. Donated by Helen Miller of West New York, NJ. A beautiful example of an 18' wooden sailing canoe used by a family in Hoboken. Canoe clubs dotted the Hudson River's shoreline as a major form of water recreation.

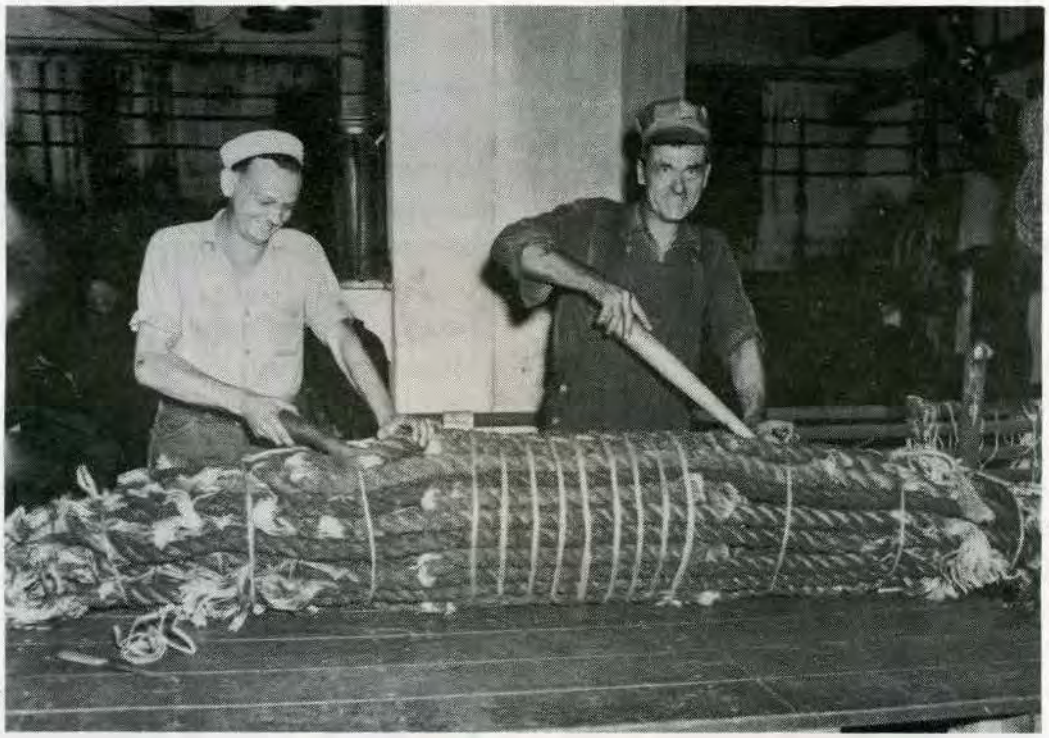
Pitch Funnels. Funnels into which molten pitch was poured for caulking deck seams. (Pitch is a distillation of tar used for waterproofing.) Seams on the outside deck were periodically filled with pitch tar so as to protect from rain and water leakage into the hull.

Pump Cover. An important task of the Barge Captain was to keep the barge afloat, which meant hand pumping the water out of the bilge. The original diaphragm pumps, (still on the outside decks of the #79), would have been covered by a wooden cover when not in use.

Timber Dolly. Wooden rollers like the modern day dolly with metal wheels. Used to move rails, logs, or bulky cargo.

Timberhook. Wooden and metal tool used for impaling heavy objects to carry them. One man would be on each handle often used with a timber dolly to move rails, logs or bulky cargo.

Two-person Rail Tong. Tool used for carrying long sections of a railroad track. One rail could weigh from 70 to 90 pounds per yard and so tongs were used at several yard intervals to transport the rail segments.



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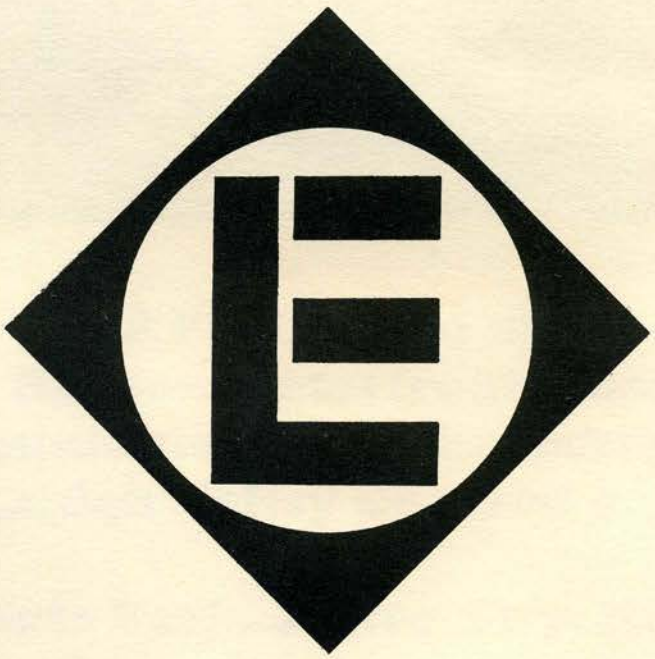

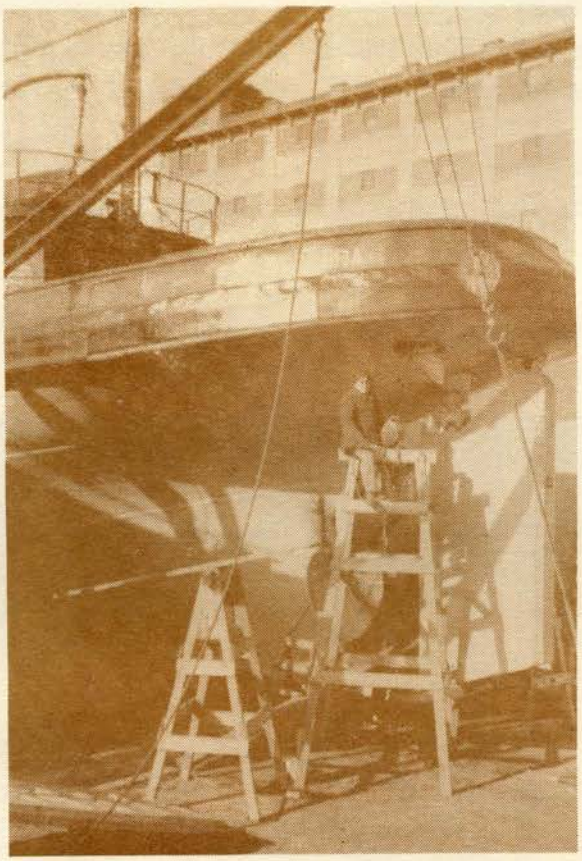

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