Board of Harbor Commissioners
City of Milwaukee

Commissioners

Wm. George Bruce
President

C. F. Ringer
Vice President

Herman Seide
J. L. Bowlus
J. L. Barchard

Staff

C. U. Smith, General Manager and Chief Engineer
K. A. Albrecht, Harbor Traffic Director and Acting Secretary
F. A. Kaiser, Principal Assistant Engineer
G. W. Lewis, Superintendent

Published by
THE BOARD OF HARBOR COMMISSIONERS
CITY OF MILWAUKEE
1933
The Port of Milwaukee
Room 709, City Hall
Milwaukee, Wisconsin, U. S. A.

Table of Contents

<table>
<thead>
<tr>
<th>Description of Port and Harbor</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aids to Navigation</td>
<td>5</td>
</tr>
<tr>
<td>Meteorological Data</td>
<td>6</td>
</tr>
<tr>
<td>Harbor Improvements by the Federal Government</td>
<td>7</td>
</tr>
<tr>
<td>Municipal Harbor Facilities</td>
<td>8</td>
</tr>
<tr>
<td>Communications</td>
<td>12</td>
</tr>
<tr>
<td>Agencies Relating to the Port of Milwaukee</td>
<td>12</td>
</tr>
<tr>
<td>Harbor Facilities at the Port of Milwaukee</td>
<td>13</td>
</tr>
<tr>
<td>Historical Background of the Milwaukee Port Project</td>
<td>14</td>
</tr>
<tr>
<td>Port Administration</td>
<td>19</td>
</tr>
<tr>
<td>Waterborne Commerce, 1900-1932 Inclusive</td>
<td>Inside Back Cover</td>
</tr>
</tbody>
</table>

List of Illustrations

<table>
<thead>
<tr>
<th>General Aerial View, Milwaukee Harbor</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal South Slip and Pier No. 1</td>
<td>3</td>
</tr>
<tr>
<td>Aerial View of Menomonee River and Canals</td>
<td>4</td>
</tr>
<tr>
<td>North Harbor Tract—South View</td>
<td>5</td>
</tr>
<tr>
<td>South Harbor Tract—South View</td>
<td>7</td>
</tr>
<tr>
<td>Municipal Air-Marine Terminal, showing ramp</td>
<td>9</td>
</tr>
<tr>
<td>Municipal Open Dock Terminal</td>
<td>10</td>
</tr>
<tr>
<td>Municipal Car Ferry Terminal</td>
<td>10</td>
</tr>
<tr>
<td>Municipal Transit Shed No. 1</td>
<td>11</td>
</tr>
<tr>
<td>Municipal Mooring Basin</td>
<td>11</td>
</tr>
<tr>
<td>Kinnickinnic River—Aerial view from the east</td>
<td>13</td>
</tr>
<tr>
<td>Views showing progressive development of Jones Island</td>
<td>16</td>
</tr>
<tr>
<td>Milwaukee River—Aerial view from the north</td>
<td>19</td>
</tr>
<tr>
<td>Milwaukee River—View west of C. &amp; N. W. Bridge</td>
<td>20</td>
</tr>
<tr>
<td>Map showing property under jurisdiction of the Board</td>
<td>Insert</td>
</tr>
<tr>
<td>Location Map—Chicago—Milwaukee</td>
<td>Back Cover</td>
</tr>
</tbody>
</table>
General Aerial View, Milwaukee Harbor
Description of Port and Harbor

General

The City of Milwaukee is located in the southeastern part of the State of Wisconsin on the west shore of Lake Michigan. By water it is approximately 260 miles south of the Straits of Mackinac or entrance to the lake, 85 miles north of the City of Chicago at the southerly end of the lake, and 85 miles from Grand Haven, Michigan, on the opposite shore of the lake. The Port of Milwaukee lies wholly within the city limits of Milwaukee. It is comprised of an outer basin or harbor of refuge protected by breakwaters, an outer commercial harbor, a river entrance channel protected by piers, and an inner commercial harbor located on the Milwaukee, Menomonee and Kinnickinnic Rivers.

The Outer Harbor

The protected outer basin or harbor of refuge outside of the constructed and projected municipal piers has an area of about 1,200 acres, of which an area of 850 acres has depths of water ranging from 19 to 35 feet.

The entrance channel extending through the outer basin and between the piers is about 5,200 feet long with a width of 460 feet at the breakwater entrance, thence 600 feet to a point outside of the piers, reducing to 320 feet at the entrance between the piers and widening to 500 feet at the river mouth.

The Inner Harbor

The Milwaukee River, flowing from the north, is joined about five-eighths of a mile above the inner ends of the piers by the Menomonee River entering from the west, and by the Kinnickinnic River entering from the south just inside of the South Pier. The entrance to the inner harbor is at the confluence of these rivers which unite to form a common outlet. These three rivers and the Kinnickin-
nic Basin constitute the present inner commercial harbor of the City of Milwaukee.

The Milwaukee River is navigable for about 2\(\frac{3}{4}\) miles with an average width of 225 feet and an average depth of 19 feet. The Menomonee River is navigable for about 2 miles with an average width of 140 feet and an average depth of 19 feet, while the Kinnickinnic River is navigable for a distance of about 2\(\frac{1}{4}\) miles, with a width ranging from 150 to 200 feet and an average depth of 19 feet.

In addition to its three rivers, Milwaukee has three artificial channels, the South Menomonee, Burnham and Kneeland Canals which connect with the Menomonee and provide jointly about the same amount of water frontage as the Menomonee River. There are thirteen artificial slips which form a part of the river system, five of these slips are part of the South Menomonee Canal, one is part of the Menomonee River, and seven are part of the Kinnickinnic River and Basin.

**Currents**

There are no defined currents in Lake Michigan. During ordinary floods, currents in the river are about 3 miles per hour, but in maximum floods the current in the Milwaukee River reaches about 7 miles per hour and in the other rivers about 5 miles per hour for a few days during the peak of the floods. During about 95% of each year, the currents in the rivers have no appreciable effect on navigation. The seasonal fluctuations of lake level, amounting to about 1.5 feet, and the extreme range of stage of Lake Michigan, amounting to from about 4 feet above to 2.5 feet below datum in the past seventy years, have no appreciable effect on the currents in the outer harbor or rivers.

**Anchorage**

The protected outer basin or harbor of refuge is used by vessels seeking shelter from storms and on account of the congested condition of the inner harbor, at times it is used by vessels awaiting an opportunity to enter there and proceed to their berths. The Basin affords excellent anchorage. Mooring to the breakwaters or piers is prohibited. Mooring accommodations for several vessels have been provided in the Kinnickinnic Basin, a landlocked area, by the Board of Harbor Commissioners.
Aids to Navigation

Milwaukee Breakwater Light Station

This station is located at the southeasterly end of the north breakwater, on the north side of the main entrance through the breakwater to the Outer Harbor. The station is of the most modern type, with the underwater portion of concrete caisson construction, surmounted by a concrete superstructure. On this base there is a two-story steel building. The roof of the building is surmounted by a steel tower, two stories high, housing the diaphone fog signal instrument, with the lantern house located in the top of the tower. Building and tower are painted red. The focal plane of the lantern is 67 feet above the water, and the light is visible for sixteen miles. The lantern is equipped with a fourth order fixed lens, illuminated by electric light controlled by a “Sign Flasher”, showing characteristic of a red flash every six seconds (10 flashes per minute) light 4.5 seconds, eclipse 1.5 seconds, candlepower 5,000.

The fog signal is an air diaphone, characteristic, group of two blasts every twenty seconds, first blast 1 second, silent 2 seconds; second blast 1 second, silent 16 seconds.

Radiobeacon Station

A radio mast 73.5 feet high supporting the north end of the antenna is located on the breakwater, 200 feet northwest of the station. The radiobeacon transmits continental code, letter “M”, two dashes, during foggy weather; every 180 seconds groups of two dashes for 60 seconds, silent 120 seconds. In clear weather this signal is transmitted daily, from 1:30 to 2:00 and from 7:30 to 8:00 A.M., and from 1:30 to 2:00 and from 7:30 to 8:00 P.M. (90th Meridian Central Standard Time).
Milwaukee Breakwater Entrance, South Side Light

A white pyramidal skeleton steel tower is located on the south side of the main entrance on a concrete base, on the north end of the south breakwater, housing a white light. The focal plane of this light is 47 feet above the water, the light being visible for 10 miles. The lens is illuminated by acetylene gas compressed in acetone. Characteristic: white flash every two seconds, white light 1 second, eclipse 1 second. 190 candlepower. The flashing of the light is controlled by an automatic flasher, and the light is cut off during the day by a sun valve.

Milwaukee North Pierhead Light

A cylindrical tower, painted red, is located on the outer end of the north harbor entrance pierhead. This tower houses a light with its focal plane 45 feet above the water, the light being visible for 14 miles. Light is furnished by a fourth-order fixed lens, illuminated by electric light, showing a fixed red light of 1700 candlepower, every ten seconds. The light and fog signal are operated by keepers through the cable by remote control from the breakwater light.

Milwaukee South Pierhead Light

A pyramidal shaft painted white is located at the outer end of the south pierhead, housing a light with its focal plane 41 feet above the water, visibility 8 miles, candlepower 70. Characteristic: light flashing white every 3 seconds, flash 0.3 seconds duration, 20 flashes per minute. The lens is illuminated by acetylene gas, regulated by an automatic flasher. The light is cut off during the day by a sun valve.

Milwaukee Breakwater South Entrance Light

A steel skeleton tower on a concrete base is located at the southerly end of the southerly breakwater, at the north side of the gap in the breakwater. Focal plane of light is 47 feet above the water. Light characteristic: a red flash of two seconds duration. This entrance is navigable only for small craft.

North Point Light (Milwaukee)

This light is located in Lake Park at North Point, the northerly limit of Milwaukee Bay. It is an octagonal iron tower, painted buff, 74 feet high, standing on a bank 80 feet above the lake. Focal plane above water, 154 feet. Characteristic: a fixed white light of 1800 candlepower, visible 18 miles, with white flash of 300,000 candlepower, 1.6 seconds duration, every 50 seconds, visible 22 miles. This is the oldest as well as one of the most important of the local beacons.

Meteorological Data

The United States Weather Bureau, a division of the Department of Agriculture, plays an important part in Milwaukee's marine life through its broadcasting of storm warnings and forecasting of weather conditions.

The Weather Bureau issues a daily bulletin forecasting weather conditions for Milwaukee and vicinity, for Wisconsin, and for Lake Michigan. The ordinary weather predictions are broadcast via the several local radio stations at intervals during the day. When approaching severe weather conditions are indicated, the prediction is telephoned to the local radio stations and the announcements are made immediately.

Small craft, storm and hurricane warnings are displayed by means of pennants by day, and lanterns by night, from a tower on the Sewage Disposal Plant adjacent to the Harbor Entrance, so that ships leaving the port are fully warned as to what to anticipate in the way of weather conditions.

Open Season of Navigation

The Port of Milwaukee is closed for vessels engaged in interlake traffic from about December to April each year, due to ice conditions at the Straits of Mackinac, the entrance to Lake Michigan. However, the harbor and rivers are navigable throughout the year for car ferries and for package-freight lines plying solely on Lake Michigan.
Fogs
Dense fogs occur at Milwaukee about two days per month during May, June, October and December, and about one day per month during the remaining months. Light fogs occur about seven days per month, with their greatest frequency during the winter months.

Harbor Improvements by the Federal Government

The original project for the improvement of Milwaukee harbor was adopted by Congress by Act of March 3rd, 1845. The existing project was authorized by various River and Harbor Acts, the act of August 30th, 1852, providing for the north pier; of March 3rd, 1881, providing for 7600 feet of the north breakwater; of March 3rd, 1889, providing for a 19-foot channel; of March 2nd, 1907, providing for the south pier and the extension of the north breakwater; of September 22nd, 1922, providing for extending and completing the north breakwater, and for the deepening and widening of the entrance channel.

The existing project is entirely completed, the north breakwater being 9961 feet in length and the south breakwater 9646 feet in length, both extending to the shore, thereby forming a protected basin in which is located the present outer commercial harbor. The width of the entrance between the breakwaters is approximately 500 feet. The river mouth, the entrance to the inner commercial harbor, is protected by two piers 360 feet apart at their outer ends and 550 feet apart at the inner
ends, about 1656 feet and 1608 feet in length for the north and south piers respectively. The entrance channel is dredged to a depth of 21 feet and has a width, outside of the piers, of 600 feet.

The caisson plant, located on the north arm of the north breakwater, was established by the Federal Government for the production of caissons used in breakwater construction on Lake Michigan.

Nineteen acres of submerged land on the North Harbor area adjacent to the north pier, have been reserved by the City of Milwaukee for the Federal Government, for the concentration of its marine activities in this district.

Municipal Harbor Facilities

General

The municipal harbor property, directly under the control of the Board of Harbor Commissioners, fronts on Lake Michigan, extending from the foot of East Wisconsin Avenue on the north to the foot of East Bay Street on the south. The property consists of two areas, the North Harbor Tract and the South Harbor Tract, separated by the entrance channel to the inner commercial harbor.

I. The North Harbor Tract

The North Harbor Tract extends from the foot of East Wisconsin Avenue on the north to the harbor entrance on the south, and east of the Chicago & Northwestern Railway right-of-way to Lake Michigan. It has a water frontage on the harbor of refuge of 4925 feet and comprises 77 acres of filled land. The following facility is located on the North Harbor Tract:

The Municipal Air-Marine Terminal

The Municipal Air-Marine Terminal is located one block southeast of the Chicago & Northwestern Railway Company’s passenger station, four blocks from the Federal Building, and ten blocks from the center of the city. It consists of 14.8 acres of fenced-in property with 1000 feet of frontage on the lake, and is equipped with a steel and concrete seaplane ramp, bituminous macadam runways, and an office building.

The Kohler Aviation Corporation uses the terminal extensively as the western terminus of their cross-lake service between Milwaukee, Wis., and Muskegon, Grand Rapids, Lansing and Detroit, Michigan, carrying United States mail, passengers and express.

There is ample space available for additional aviation lines on the above-described property, which is subject to lease upon application to the Board of Harbor Commissioners.

II. The South Harbor Tract

The South Harbor Tract extends from the southern boundary of the Sewerage Commission property, 1000 feet south of the harbor entrance, southerly to East Bay Street, and east from the Kinnickinnic River and Kinnickinnic Mooring Basin to Lake Michigan, on property commonly known as Jones Island.

The area consists of 111 acres of land directly under the control of the Board of Harbor Commissioners, and 51.5 acres under joint-use agreement with the Illinois Steel Company. The developed dock property totals 7461 feet and the improved property 5030 feet.

The following facilities are located on the South Harbor Tract:

(a) The Municipal Open Dock Terminal

The Municipal Open Dock Terminal is located on the Inner Harbor, immediately south of the harbor entrance and on the east side of the Kinnickinnic River. There is no bridge interference and no tugs are required for berthing at the dock.

The dock is 1350 feet long, has two dock side tracks 850 feet in length, and is equipped with two 25-ton capacity gantry cranes with 55-foot booms and one 30-ton capacity locomotive crane with 60-foot boom. Auxiliary equipment includes magnets, buckets, chains and slings. The dock is equipped to handle bulk and package freight directly to cars or storage, ample storage space being provided adjacent to the dock for bulk commodities.
(b) The Municipal Car Ferry Terminal

The Municipal Car Ferry Terminal is located south of the harbor entrance, adjacent to the Sewage Disposal Plant, on the east side of Kinnickinnic River. The terminal is under lease to the Pere Marquette Car Ferry Company, operating car ferries between Milwaukee and Ludington, Michigan, and provides a direct connection with the Chicago & Northwestern Railway. The facility is supported by ample service and classification yards and connecting tracks.

(c) Municipal Transit Shed No. 1

The Municipal Transit Shed is located on the north side of South Slip No. 1 on the outer harbor. The dock on which it is located is constructed of steel sheet piling with a concrete relieving platform resting on wood piles, and is 950 feet in length. The shed is 448 feet long by 90 feet wide, providing approximately 40,000 square feet of storage area. It is of steel frame construction, with wrought iron sheet siding and roof, and is separated into four compartments by three fire walls.

The dock apron in front of the shed is 23.5 feet in width, and is equipped with a docksde track and two straight-line semi-portal gantry cranes of 5-ton capacity each. The rear of the shed is provided with a platform and canopy for truck loading, and a depressed track for car loading. The shed is equipped with a dry-line automatic sprinkler system, truck scale, broken package lock-room, and office space.

Natural light is provided in the shed by glass roof panels, and traffic openings are provided with rolling steel fire doors of a type approved by underwriters.

(d) South Pier No. 1

South Pier No. 1 is located on the Outer Harbor on the south side of South Slip No. 1. It is constructed of steel sheet piling with concrete relieving platform resting on wood piles, and is 970 feet in length by 300 feet in width.

The pier is utilized to handle bulk commodities of any character, the north side of the pier being equipped with 2 25-ton capacity gantry cranes fitted to use magnets, buckets or slings. Dockside trackage is provided on both north and south sides of the pier.

(e) Municipal Mooring Basin

The Municipal Mooring Basin is located one mile south of the harbor entrance, and just off the Kinnickinnic River, in the Kinnickinnic Basin out of the lane of vessel traffic. The mooring basin contains an area of 36.5 acres with an average water depth of 30 feet. The east and south sides of the basin are protected by a bulkhead consisting of 1950 feet of steel sheet piling. Deadmen for use in mooring vessels are located at convenient intervals. The basin is used the year around for mooring of vessels and is considered by
experienced operators the finest on the Great Lakes.

(f) Industrial Sites

There is ample acreage available on the South Harbor Tract for the location of industries utilizing water transportation, and the Board of Harbor Commissioners is in a position to negotiate leases over a long period of years with interested parties. Office space for lease in the Board’s office building at the north end of the property is also available at present.
Communications

**Steam Railways:**
- Chicago, Milwaukee, St. Paul & Pacific Railroad Company.
- Chicago & Northwestern Railway Company.

**Car Ferry Lines:**
- Grand Trunk-Milwaukee Car Ferry Company.
- Pere Marquette Car Ferry Company.

**Electric Railroads:**
- Chicago, North Shore & Milwaukee Railroad Company.
- The Milwaukee Electric Railway & Light Company.

**Steamship Lines:**
- Atlantic-Great Lakes Steamship Company.
- Canada-Atlantic Transit Company.
- Federal Motorship Corporation.
- Great Lakes Transit Corporation.
- Newfoundland Canada Steamships, Ltd.
- Nicholson-Universal Steamship Company.
- Pere Marquette Line Steamers.
- Seaboard-Great Lakes Corporation.
- Tree Line Navigation Company, Ltd.
- Wisconsin-Michigan Transportation Company.

**Air Transportation:**
- Kohler Aviation Corporation.
- Northwest Airways, Inc.

## Agencies Relating to the Port of Milwaukee

### U. S. Government Agencies:

- **War Department:**
  - Engineer’s Office, Headquarters Milwaukee District.
  - District Engineer, Federal Building.

- **Treasury Department:**
  - Customs Division, Headquarters Wisconsin Customs District No. 37: Collector of Customs, Federal Building.
  - Coast Guard: McKinley Park.
  - Public Health Service: Federal Building.

- **Department of Commerce:**
  - Bureau of Lighthouses, Headquarters 12th District, Federal Building.
  - Steamboat Inspection Service: Federal Building.
  - Bureau of Foreign & Domestic Commerce: Federal Building.

- **Department of Labor:**
  - Immigration Service: Federal Building.

- **Department of Agriculture:**
  - Weather Bureau: Meteorologist, Federal Building.
  - Bureau of Agricultural Economics: Grain Supervisor, 225 East Michigan Street.

### Other Agencies:
- Milwaukee Grain & Stock Exchange, 225 East Michigan Street.
- Milwaukee Association of Commerce, 740 North Second Street.
- Great Lakes Harbors Association: 207 East Michigan Street.
- Milwaukee Harbor & Rivers Assoc.: 324 East Wisconsin Avenue.
- Lake Carrier's Association, 310 West State Street.
- Shipmaster's Association, 207 East Michigan Street.
- American Bureau of Shipping: 710 North Plankinton Avenue.

### Customhouse Brokers:
- M. E. Dey & Company, 425 East Wisconsin Avenue.
- Salentine & Company, 619 North Jefferson Street.

### Steamship Agents:
- Walter Fitzgerald, 611 North Broadway.
- Vance & Joys, 611 North Broadway.

### Stevedore Companies:
- S. H. Du Puy, 412 South Water Street.
- W. J. Nugent, 301-303 North Sixth Street.

### Marine Contractors:
- Edward E. Gillen Company, 626 East Wisconsin Avenue.
Harbor Facilities at the Port of Milwaukee

A. Municipal Harbor Facilities:
1. Municipal Open Dock Terminal; Board of Harbor Commissioners, operator
2. Municipal Car Ferry Terminal: Pere Marquette
   Railway Co., operator
3. Municipal Transit Shed No. 1: W. J. Nugent, operator
4. Municipal South Pier No. 1: Board of Harbor
Commissioners, operator
5. Municipal Mooring Basin: Board of Harbor Commissioners, operator

B. INNER HARBOR FACILITIES:
1. Coal Docks:
   (a) Callaway Fuel Company (2 docks).
   (b) Fellenz Coal & Dock Company.
   (c) Lehigh Valley Coal Sales Company.
   (d) Milwaukee Coke & Gas Company.
   (e) Milwaukee Gas Light Company.
   (f) Milwaukee-Western Fuel Company (7 docks)
   (g) Northwestern Fuel Company.
   (h) Philadelphia & Reading Coal & Iron Company.
   (i) Schneider Fuel & Supply Company.
   (j) United Coal & Dock Company (3 docks).
   (k) Wisconsin Great Lakes Coal & Dock Company.
   (l) Younghermen & Ohio Coal Company.

2. Car Ferry Slips:
   (a) Grand Trunk Railway Company (2 slips).
   (b) Pere Marquette Railway Company (2 slips, 1 municipal).

3. Cement Docks:
   (a) Huron Portland Cement Company.
   (b) Manitowoc Portland Cement Company.
   (c) Petoskey Cement Company.
   (d) W. H. Pipkorn Company.
   (e) Universal Atlas Cement Company.

4. Sand Docks:
   (a) Lake Shore Sand & Stone Company.
   (b) Sand Products Corporation.
   (c) Wisconsin Asphalt Paving Company.

5. Open Docks:
   (b) Chicago & Northwestern Railway Company.

6. Grain Elevators:
   (a) Donahue-Stratton Kinnickinnic Elevator.
   (b) Elevator "E", Chi., Milw., St. P. & P. R. R. Co.
   (c) Rialto Elevator, Chi. & Northwestern Ry. Co.

7. Dock Warehouse Operators:
   (a) Canada-Atlantic Transit Company.
   (b) Chicago & Northwestern Railway Company.
   (c) Chicago, Milwaukee, St. Paul & Pacific R. R. Company.
   (d) Great Lakes Transit Corporation.
   (e) Hansen Storage Company.
   (f) National Terminals Corporation.
   (g) Nicholson-Universal Steamship Company.
   (h) Pere Marquette Line Steamers.
   (i) Terminal Warehouse Company.
   (j) Wisconsin-Michigan Transportation Company.

**Historical Background of the Milwaukee Port Project**

The people of Milwaukee, to a far greater extent than those of other Great Lakes cities, have always been conscious of the importance of the harbor to the city and appreciative of the transportation benefits which the Great Lakes have bestowed upon this region. The site selected for the city by the early settlers, at a point where three rivers had their confluence on a natural bay, showed a keen foresight and appreciation of the future possibilities.

**First Harbor Entrance**

As early as 1856, while Milwaukee was still a struggling pioneer settlement, local interests succeeded in securing a congressional appropriation for a survey of the harbor. The entire region of what came to be known as "Jones Island" was little more than a vast swamp, and the first important improvement was the creation of a harbor entrance by cutting a channel through the marsh. This first harbor entrance was located opposite Greenfield Avenue, about 3000 feet south of the present entrance. Later there was considerable agitation to bring the harbor entrance closer to the business center of the city, a sentiment which culminated in 1852 in relocating the entrance at its present location, by cutting through a narrow neck of dry land to connect with the Milwaukee River. Although there were several federal appropriations toward the cost of this work, the major portion of the expense was borne by the city.

The importance of the harbor continued to grow. From 1850 through the Civil War, Milwaukee was the world’s primary wheat market, and a huge volume of grain moved
from this port via lake to Buffalo and foreign ports. It is interesting to note that as early as the pre-Civil War period, the sailing ships of that day carried cargoes from Milwaukee direct to the ports of Europe, a forerunner of the St. Lawrence seaway project.

Development of Menomonee Valley

Lake commerce continued to expand and to demand more room. In 1868 it was decided to reclaim for navigation the Menomonee Valley, which was at that time nothing but a morass. In 1869 the legislature authorized the creation of a Canal Commission. Necessary lands were acquired by purchase or gift, and the new Commission lost little time in doing the work for which it was appointed. The Menomonee River was widened, straightened and deepened and two canals, the South Menomonee Canal and Burnham's Canal, were cut parallel to the river. Private parties cut a number of slips into their properties to connect with these canals, and thus, through the combined efforts of the city and the property owners, several miles of water frontage were added to Milwaukee's harbor at very nominal cost. The district is now the location of an intensive industrial development and is the center of Milwaukee's immense coal trade.

Origin of Outer Harbor Plan

In 1881, Congress made the initial appropriation for the construction of a breakwater across Milwaukee Bay. Extensions to the original breakwater were authorized from time to time, and the project was completed in 1929. Approximately six million dollars has been expended to date, and the bay is now completely protected by two breakwater sections, the northerly one 9961 feet long and the southerly, 9646 feet. These breakwaters form a protected basin which constitutes the Harbor of Refuge.

In 1900 Mayor David S. Rose in his annual message to the Common Council, recommended the construction of terminals on the lake side of Jones Island, to handle the demands of our growing commerce. Public sentiment and the federal authorities were at first adverse to the project of an outer harbor development. A Permanent Harbor Improvements Committee of ten, appointed by the Mayor in 1901, studied the proposition but made no recommendations looking toward a public port on the outer harbor. It did recommend that the federal government be requested to make a permanent survey of the harbor, and that permanent harbor lines be established. A report by the U. S. District Engineer in 1905 recommended only inner harbor improvements, including widening of sections of the Menomonee and Kinnickinnic Rivers and the creation of turning basins in the latter stream. Very little was done to make this project a reality.

In 1908 a special Common Council committee of five was appointed to ascertain the cost of acquiring Jones Island and the feasibility of establishing terminals thereon. A resolution was introduced in the Common Council favoring the Outer Harbor development; and the Council requested that a federal survey be made toward that end. A preliminary survey by the District Engineer stated that such a development would probably be required in the near future.

In 1909 the Council Committee reported, recommending the acquisition of Jones Island and the establishment of public terminals thereon. The Committee was authorized to engage Mr. Isham Randolph, a well-known consulting engineer of Chicago, Illinois, to prepare a detailed engineering report and a plan of development. Mr. Randolph submitted his detailed report early in 1910; but the Council in the meantime had a change of sentiment, postponed the resolutions in favor of the project, and rejected the Randolph plan.

First Harbor Commission

The Mayor was then authorized to appoint a Harbor Commission of nine members, to consist of citizens of Milwaukee familiar with shipping and transportation problems, to act in an advisory capacity to the Common Council. The appointments to this Commission were made by Mayor Seidel in October, 1911, but the Commission was not organized until February, 1912.

After preliminary studies, the Commission submitted a report in May, 1912, in which it
recommended the immediate acquisition of Jones Island. This report further stated that although the development of Jones Island on the lake side was not required as yet, that the inner side of the Island should be revetted and developed, and that Kinnickinnic Basin should be deepened. It further recommended certain channel improvements for the Menomonee and Kinnickinnic rivers.

This early Harbor Commission thereupon ceased its activities, having been declared illegal by the Common Council on the grounds that appointments to the Commission had not been confirmed by the Council. However, in August, 1912, the Council authorized the appointment of a new Harbor Commission, which appointments were made by Mayor G. A. Bading on October 12, 1912.

Condemnation of Jones Island

The reorganized Harbor Commission, like its predecessor, also urged that Jones Island be acquired without delay, inasmuch as it offered the only remaining opportunity for the municipality to acquire an area of water frontage available for intensive terminal development. The Common Council approved the recommendation, appropriated funds, and ordered the condemnation of Jones Island as far south as the old harbor entrance. The Sewerage Commission was authorized to acquire the northerly 1000 feet of the tract for the sewage disposal plant development.

In 1914 the Commission negotiated an agreement of far-reaching importance with the Chicago & North Western Railway, whereby the city acquired riparian rights north of the harbor entrance in exchange for property situated back from the waterfront. This agreement made possible the present fine park development north of Wisconsin Avenue, and the development of harbor and airport facilities south of Wisconsin Avenue to the harbor entrance.

Harbor Survey

In 1919 the Commission by authority of the Common Council, engaged a prominent port consultant, Mr. H. McLellan Harding of New York, to study the project and prepare an engineering report and plans for the development. In due course Mr. Harding’s report was received, reviewed by the Commission, and transmitted to the Common Council, which approved the report on June 28, 1920. The Harding plan is the general basis of the development as now outlined.

The transmission of the Harding Report to the Common Council was the last official act of the old Harbor Commission. During its regime this Commission accomplished many of the fundamental steps in the gradual development of the project and laid a firm foundation for later accomplishments. The achievements of this Commission during the years 1912-1920 include the following important measures:

Handled the condemnation of the northern half of Jones Island and inaugurated proceedings for condemnation of the lower half;

Removed obstructing corners in the Menomonee River and South Menomonee Canal;

Made surveys for establishment of a permanent system of harbor lines;

Constructed a rubble mound breakwater in the lake from E. Wisconsin Avenue to the harbor entrance to protect the fill on the North Harbor Tract;

Revetted the inner side of Jones Island and bulkheaded the lake side;

Secured federal surveys for additional breakwater protection for Milwaukee Harbor;

Secured the Harding plan and engineering report;

Secured the legislative enactment which authorized the present Board of Harbor Commissioners, and which assures a modern plan of port administration.

Present Harbor Commission

The old Harbor Commission was supplanted by the Board of Harbor Commissioners, on June 1, 1920, under authority granted by Chapter 289, Laws of Wisconsin of 1919. The new Board has certain administrative powers, subject to Common Council approval, in contrast to the old Commission, which was purely advisory. The project has made rapid strides since 1920.

Filling on the North Harbor Tract with city waste materials was carried on gradually, and
completed in 1931, a total of 77 acres having been filled in at very low cost.

In 1926, following years of negotiation, the Board concluded an agreement with the Illinois Steel Company, whereby the city is to be deeded the southern half of Jones Island in return for an equivalent area to be filled in the lake by the city for the company. Pending completion of this filling and transfer of the respective titles, the city has joint-use privileges with the company for the property as far south as East Bay Street. This very important agreement was approved by the Common Council and its legality upheld by the Wisconsin Supreme Court in a friendly suit. The Illinois Steel Company property constitutes the key to proper railroad connections to the South Harbor Tract.

Construction Program

The consummation of this agreement removed the last obstacles to the construction of actual facilities, following many years of arduous preparation.

In 1927 and 1928 the Board awarded contracts for the construction of the first municipal facility, a car ferry terminal, together with a classification yard, a service yard, and connecting tracks. The terminal was formally dedicated and placed in service on July 9, 1929. Shortly thereafter the Municipal Open Dock Terminal was completed and placed in service.

In 1927, in response to the demands of the business community, the Board set aside a portion of the North Harbor Tract for temporary use as an airport, which was christened Maitland Field in honor of the eminent army aviator. A considerable expenditure was made for lighting and improving the field; but it was soon apparent that the location imposed limitations which made its use for land planes more or less impractical except for emergency landings. The site offered greater possibilities as a terminal for seaplanes or amphibians and it was determined to develop it as a seaplane terminal. In June 1931 the Municipal Air-Marine Terminal was dedicated and is now the western terminus for an important cross-lake air line.

In 1931 the Board launched a construction program totalling $1,788,000 which is completed at the present time. The units involved included the following:

Construction of dock and office building by the Sewerage Commission for the Harbor Board to the value of $400,000 in exchange for lands deeded to the Sewerage Commission.

Construction of South Pier No. 1 and South Slip No. 1.

Construction of 3840 feet of steel bulkhead in the lake, behind which about 70 acres of land was filled in by hydraulic dredging.

Construction of 1950 feet of steel bulkhead in the east bank and south end of Kinnickinnic Basin, and dredging of the Basin to provide a sheltered mooring area for large vessels.

Construction of a large steel transit shed on the north side of South Slip No. 1.

Construction of trackage and roadway connections to South Slip No. 1 and South Pier No. 1.

Construction of roadways, water mains and sewer lines.

Equipped the transit shed with two 5-ton capacity semi-portal straight-line gantry cranes, and the pier with two 25-ton capacity gantry cranes.

Policy of Operation

The Board is on record as favoring, in general, municipal operation of the various harbor facilities. Certain facilities, however, are of such a nature as to render municipal operation impractical. With this in view, the car ferry terminal is leased jointly to the Pere Marquette and Chicago & Northwestern Railways; Transit Shed No. 1 has been leased to a private operator, Mr. W. J. Nugent; and a portion of the Air-Marine Terminal is leased to the Kohler Aviation Corporation.

St. Lawrence Waterway

A treaty setting forth the terms on which the St. Lawrence Seaway will be constructed was signed by representatives of the United States and the Dominion of Canada at Washington, D. C., on July 18th, 1932, and is now awaiting ratification by both governments.

The completion of this waterway will give tremendous impetus to shipping and industrial activities throughout the Great Lakes region. The City of Milwaukee, by reason of its modern outer harbor facilities, is amply prepared to
THE PORT OF MILWAUKEE, WISCONSIN

accommodate any volume of new tonnage made available by the Seaway. Milwaukee stands foremost among those Great Lakes cities which stand to benefit by the Seaway and is fully prepared to take advantage of its opportunities in this respect.

Port Administration

Municipal Control

THE control of the Port of Milwaukee, which is entirely within the city limits, is vested in the Board of Harbor Commissioners, a municipal organization.

Organization

The Board of Harbor Commissioners consists of five members appointed for a term of three years by the Mayor, subject to confirmation by the Common Council, the terms of not

*Milwaukee River—Aerial view from the north*
THE PORT OF MILWAUKEE, WISCONSIN

more than two of the commissioners expiring in any one year. The members serve without compensation and until their successors are appointed. Vacancies for unexpired terms are filled in the same manner as the original appointment. The Board elects annually a president to preside at meetings of the Board, and a vice-president to preside in the absence of the President. The Board has the power to appoint a secretary, not a member of the Board, staff officers, and other employees, subject to the civil service law applicable to the city.

Duties and Powers

The Board of Harbor Commissioners has the power to make plans for the improvement of all waterways within the harbor, providing for the construction of such docks, wharves, warehouses, piers, slips, basins, railway tracks, belt railways, airports and air fields, as may be necessary for the needs of commerce and shipping, subject to approval or modification by the Common Council.

The Board of Harbor Commissioners has exclusive charge and control over its facilities and has the power to fix and regulate charges and rentals for all public facilities, subject to prior approval of the same by the Common Council of the city.

The city may authorize funds for the construction of harbor and airport improvements, out of any taxes or bonds. For the repair, maintenance, operation and administration of harbor and airport facilities, and for the redredging of any waterways, the Board may use any funds provided by the city. The Board is also authorized to finance the construction of facilities by the issuance of mortgage certificates, to be retired from the earnings of the particular facility.

Proposed dock lines must be submitted to and approved by the Board of Harbor Commissioners prior to their establishment by the Common Council of the city.

Police power within the harbor is vested in a Harbor Master, who is under the jurisdiction of the Commissioner of Public Works.

Milwaukee River looking west from C. & N. W. Bridge
AMONG the eighty important ports on the Great Lakes, Milwaukee has always held a high rank from the standpoint of both tonnage and cargo value. At present it ranks seventh among Great Lakes ports in tonnage, and second in cargo value. Among the leading commodities received and shipped at the Port of Milwaukee, the following are the most important: coal, grain, pig iron, structural iron and steel, scrap iron, sand and gravel, wood pulp, Milorganite, cement, sugar, automobiles, canned goods, and miscellaneous package freight.

The following tabulation showing waterborne commerce at the Port of Milwaukee from 1900 to 1932, both inclusive, is obtained from statistics compiled by the Corps of Engineers, United States Army:

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Tons</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>3,703,340</td>
<td></td>
</tr>
<tr>
<td>1901</td>
<td>4,087,597</td>
<td></td>
</tr>
<tr>
<td>1902</td>
<td>3,594,122</td>
<td></td>
</tr>
<tr>
<td>1903</td>
<td>5,071,708</td>
<td></td>
</tr>
<tr>
<td>1904</td>
<td>5,406,547</td>
<td></td>
</tr>
<tr>
<td>1905</td>
<td>5,454,347</td>
<td></td>
</tr>
<tr>
<td>1906</td>
<td>6,204,024</td>
<td></td>
</tr>
<tr>
<td>1907</td>
<td>5,894,492</td>
<td></td>
</tr>
<tr>
<td>1908</td>
<td>5,375,013</td>
<td></td>
</tr>
<tr>
<td>1909</td>
<td>5,787,472</td>
<td>$54,344,305</td>
</tr>
<tr>
<td>1910</td>
<td>7,744,985</td>
<td>86,786,200</td>
</tr>
<tr>
<td>1911</td>
<td>7,612,241</td>
<td>119,658,735</td>
</tr>
<tr>
<td>1912</td>
<td>7,779,627</td>
<td>129,921,850</td>
</tr>
<tr>
<td>1913</td>
<td>8,647,230</td>
<td>140,734,750</td>
</tr>
<tr>
<td>1914</td>
<td>8,484,829</td>
<td>132,870,899</td>
</tr>
<tr>
<td>1915</td>
<td>8,119,875</td>
<td>130,348,921</td>
</tr>
<tr>
<td>1916</td>
<td>7,925,488</td>
<td>267,155,651</td>
</tr>
<tr>
<td>1917</td>
<td>6,820,864</td>
<td>309,589,900</td>
</tr>
<tr>
<td>1918</td>
<td>7,086,550</td>
<td>362,564,868</td>
</tr>
<tr>
<td>1919</td>
<td>7,008,200</td>
<td>320,079,300</td>
</tr>
<tr>
<td>1920</td>
<td>5,760,569</td>
<td>216,381,900</td>
</tr>
<tr>
<td>1921</td>
<td>6,431,147</td>
<td>201,660,800</td>
</tr>
<tr>
<td>1922</td>
<td>5,602,935</td>
<td>281,415,200</td>
</tr>
<tr>
<td>1923</td>
<td>7,765,041</td>
<td>415,936,800</td>
</tr>
<tr>
<td>1924</td>
<td>6,476,414</td>
<td>349,015,900</td>
</tr>
<tr>
<td>1925</td>
<td>6,907,811</td>
<td>450,001,200</td>
</tr>
<tr>
<td>1926</td>
<td>7,597,516</td>
<td>411,129,900</td>
</tr>
<tr>
<td>1927</td>
<td>8,233,198</td>
<td>466,726,000</td>
</tr>
<tr>
<td>1928</td>
<td>7,984,794</td>
<td>514,389,650</td>
</tr>
<tr>
<td>1929</td>
<td>8,564,363</td>
<td>486,228,800</td>
</tr>
<tr>
<td>1930</td>
<td>7,703,182</td>
<td>350,551,900</td>
</tr>
<tr>
<td>1931</td>
<td>6,576,277</td>
<td>255,868,400</td>
</tr>
<tr>
<td>1932</td>
<td>5,247,267</td>
<td>167,197,100</td>
</tr>
</tbody>
</table>

*No Statistics Available.
Visit Milwaukee

Milwaukee

Chicago

Lake Michigan

by train

by plane

by boat

by auto

by interurban

Delightful Scenery - Excellent Accommodations

Industry - Recreation

Distance: eighty-five miles

Time: from one to three hours

A Century of Progress