Price 30 cents

For more detail consult inset on Coast Chart No. 76.
LAKE MICHIGAN
WAUKEGAN
NORTH CHICAGO
GREAT LAKES U.S. Naval Training Sta.
LAKE BLUFF
LAKE FOREST
FORT SHERIDAN
HIGHLAND PARK
RAVINIA
GLENCOE
HUBBARD WOODS
WINNETKA
KENILWORTH
WILMETTE
EVANSTON
CITY OF CHICAGO
SOUTH CHICAGO
PULLMAN
KENSINGTON
LAKE CALUMET
WOLF LAKE
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BURNHAM
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LAKE CO.
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BERRIEN CO.
ILLINOIS
COOK
LAKE
INDIANA
PORTER
LAPORTE
MICHIGAN
BERRIEN
For more detail consult Harbor Chart No. 754
6 ft. contours
12 ft. "
18 ft. "
21 ft. "
87°50'
87°40'
87°30'
87°20'
87°10'
87°00'
86°50'
86°40'
86°30'
86°20'
42°20'
42°10'
42°00'
41°50'
41°40'

WAR DEPARTMENT
CORPS OF ENGINEERS

SURVEY OF THE NORTHERN AND NORTHWESTERN LAKES
Made in obedience to Acts of Congress
and orders of
THE CHIEF OF ENGINEERS, U. S. ARMY

COAST CHART No. 5
LAKE MICHIGAN
WAUKEGAN, ILL. TO SOUTH HAVEN, MICH.

Prepared under the direction of
Lieut. Colonels C.S. RICHÉ and MASON M. PATRICK, Corps of Engineers, U.S. Army, in 1912 and
first issued under the direction of
Lieut. Colonel J.C. SANFORD, Corps of Engineers, U.S. Army, in 1913
Third edition revised and published under the direction of
Lieut. Colonel G.B. PILLSBURY, Corps of Engineers, U.S. Army, in
1924

POLYCONIC PROJECTION

SCALE 1:120,000.

PUBLIC PROPERTY
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AUTHORITIES

U.S. LAKE SURVEY		
	Original Surveys	*in 1871–1874.*
	Later Surveys	*South end of Lake Michigan 1908 & 1910 West shore of Lake Michigan 1910–1911, Harbors of Waukegan 1907, Michigan City 1915, St. Joseph & Benton Harbor 1907, and 1915, South Haven 1907 and 1915,*
U.S. ENGINEER OFFICE, Chicago, Ill.		*Inland topography 1902–1917, Calumet River and Lake 1911, Michigan City Harbor 1913. Extensive Harbor Improvements to date of issue.*
U.S. ENGINEER OFFICE, Milwaukee, Wis.		*Harbor Improvements to date of issue.*

NOTES

Soundings are referred to Standard Low Water Datum. See table of comparative elevations of water levels.
Water areas with depths to 6, 12, 18 and 21 feet are tinted in blue. Depths within tinted areas are in feet, *those on untinted areas are* in fathoms.
Latitudes and Longitudes are based on the "North American Datum."
The shore line is shown as located at time of survey.
Figures on land indicate elevations in feet above mean lake level.
Harbor lines established by the Secretary of War are indicated thus •–·–·–·–·–•
Chart preparation under the supervision of Andrew J. Swift, *Assistant Engineer.*

Comparative Elevations of Water Levels on Lake Michigan referred to Mean Sea Level (adjusted Levels of 1903)

High Water of 1838,	584.69 ft.
Mean stage 1860–1923, both inclusive,	581.09 ft.
Low water datum for Harbor Improvements, (1916),	579.60 ft.
Lowest recorded monthly mean, (Jan. 1924),	578.54 ft.
Plane of reference of this chart, (Standard Low Water)	578.50 ft.

0.04 1.10 2.59 6.19

DRY DOCKS

Location	Name or Owner	Length On Blocks	Length Over all	Width Bottom	Width Top	Width Entrance	Depth Over Sill
		ft.	ft.	ft.	ft.	ft.	ft.
Calumet, Ill.	Chicago Ship Bldg. Co. No. 1	547	570	....	100	52.0–71.7	16
" "	" " " " No. 2	667.8	727.3	....	103	79.8–90.2	15.7

Depths referred to Harbor Improvement Datum.

NOTICE

MARINERS *are requested to report uncharted obstructions or errors in this chart to the* U.S. LAKE SURVEY OFFICE, *or to the nearest* U.S. ENGINEER OFFICE, *(See form attached to Supplements to Bulletin)*

SAILING DIRECTIONS

Bearings of sailing courses are true. Distances in statute miles.
The distances *given on* sailing lines *are to or from the points of departure shown on Coast and General Charts.*
Sailing lines: ------------------------ Range lines: ·-·-·-·-·-·-·-·-·-·

SCALE OF FEET
SCALE OF YARDS
SCALE OF METERS
STATUTE MILES

MAGNETIC VARIATIONS

LOCALITY	OBSERVED VARIATION	DATE OF OBSERVATION	COMPUTED VARIATION FOR JULY, 1925.
South Haven	1° 12'.7 E.	Oct. 1904	0° 27' E.
Michigan City	1° 38'.1 E.	Oct. 1907	1° 05' E.
Waukegan	2° 38'.6 E.	July 1908	2° 05' E.

NOTE: The magnetic variations on compass roses apply to their respective positions on this chart (unless otherwise noted) and are expressed to the nearest quarter degree.

For DESCRIPTIONS OF DANGERS, &c. and for LATEST REPORTS OF DEPTHS IN IMPROVED HARBORS and CHANNELS &c.
Consult the latest Bulletin and Supplements of the Survey of Northern and Northwestern Lakes published under the direction of the Chief of Engineers, U.S. Army, by the U.S. Lake Survey Office, Detroit, Mich.
These publications are obtainable by chart purchasers upon application to the Lake Survey Office.

ABBREVIATIONS

F.– fixed, *Fl.*– flashing, *Alt.*– alternating *Gp.*– group, *Occ.*– occulting, *W.*– white, *R.*– red, *B.*– black, *G.*– green, *sec.*– seconds LT.– Light, R.– Rear, RGE.– Range, BKW.– Breakwater, *S.*– spar, *C.*– can, *N.*– nun, *H.S.*– horizontal stripes, *V.S.*– vertical stripes, FOG B.– Fog Bell, FOG D.– Fog Diaphone, FOG S.– Fog Siren, FOG W.– Fog Whistle, C.G.S.– Coast Guard Station, STO. SIG. STA.– Storm Signal Station, RADIOTEL. STA.– Radiotelegraph Station, Mls.– Miles, Isl.– Island, Pt.– Point, *Shl.*– Shoal, *HBR.*– Harbor.
The figures in brackets placed after the letters denoting character of light indicate its visibility in statute miles when observers eye is 15 feet above lake level.

OPENING AND CLOSING OF NAVIGATION

Location	Average dates Opening	Average dates Closing	Years used for averages	Average number of days closed
Chicago & Calumet Rivers	Feb. 27	Jan. 7	25	51
Illinois & Michigan Canal	Apr. 1	Nov. 24	45	128

NOTE: The ice in Lake Michigan adjacent to Chicago, Milwaukee and Grand Haven is generally kept broken by ice boats.

CANALS.

Name of Canal	Connecting Waters	Terminal Points	Length of Canals in Stat. Mls.	Locks Number	Locks Length	Locks Width	Locks Depth	Total Elevation of Lockages
					ft.	ft.	ft.	ft.
North Shore Sanitary Channel	L. Mich. & North Br. Chicago R.	Wilmette – Lawrence Ave.	8.5	1	130	30	11	3
Sanitary & Ship Can. of Chicago	Chicago Riv. and I. & M. Canal	Chicago – Joliet	32.35	1	124–130	22	12	36
Illinois & Michigan	Sanitary Can. & Illinois R.	Joliet – La Salle	64	11	98–102	16	4	98
Illinois & Mississippi (Hennepin)	Illinois R. & Mississippi R.	Rock Island – Hennepin	75	34	170	35	7	289

Consult Bulletin for details

HARBOR AT MICHIGAN CITY INDIANA
1924
SCALE 1:10,000

NOTE
Soundings in feet are referred to Standard Low Water datum, See table of comparative elevations of water levels.
Water areas with depths to 6, 12 and 18 feet are tinted in blue.
Latitudes and Longitudes are based on the "North American Datum."
Topographic contour interval 10 feet.

SCALE OF FEET.
SCALE OF METERS

Issued December 30, 1924 (1500)

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On sale at U.S. LAKE SURVEY OFFICE, Detroit, Michigan
" " " U.S. ENGINEER OFFICE, Buffalo, N.Y.
" " " U.S. ENGINEER OFFICE, Sault Ste. Marie, Mich.
" " " U.S. ENGINEER OFFICE, 1st District, New York, N.Y.
" " " U.S. ENGINEER OFFICE, Albany, N.Y.
AIDS TO NAVIGATION CORRECTED FROM INFORMATION RECEIVED TO DECEMBER 30, 1924

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