

TREASURY DEPARTMENT  
UNITED STATES COAST GUARD

# LIGHT LIST GREAT LAKES

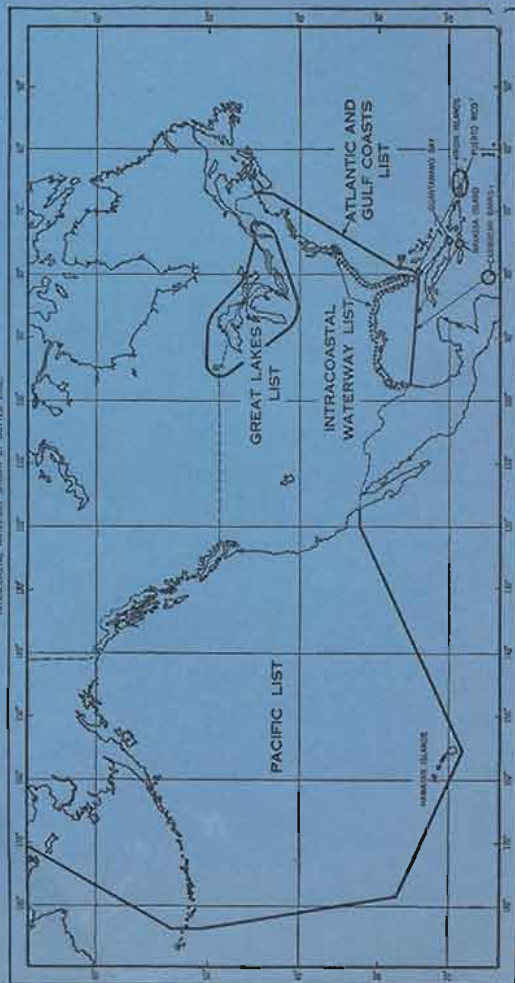
UNITED STATES  
AND  
CANADA

CG-159



1950

LIMITS OF LIGHT LISTS PUBLISHED BY  
U. S. COAST GUARD  
THE HEAVY LINES INDICATE LIMITS EXERCISED BY LIGHT LIST.  
INTRACOASTAL WATERWAY SYSTEM BY DOTTED LINE.



NOTE: AN ADDITIONAL LIST FOR MISSISSIPPI RIVER SYSTEM, LIMITS NOT SHOWN ON ABOVE DIAGRAM.

TREASURY DEPARTMENT  
UNITED STATES COAST GUARD

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LIGHT LIST  
**GREAT LAKES**

UNITED STATES AND  
CANADA

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NINTH COAST GUARD DISTRICT

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CORRECTED TO MARCH 1, 1950

CG-159

UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1950

# LIGHT LIST, GREAT LAKES

## INTRODUCTION AND EXPLANATION

The following table is for the purpose of recording the posting of changes to the light list from Notices to Mariners.

### Notices to Mariners

#### YEAR 1950

1.....	9.....	17.....	25.....	33.....
2.....	10.....	18.....	26.....	34.....
3.....	11.....	19.....	27.....	35.....
4.....	12.....	20.....	28.....	36.....
5.....	13.....	21.....	29.....	37.....
6.....	14.....	22.....	30.....	38.....
7.....	15.....	23.....	31.....	39.....
8.....	16.....	24.....	32.....	40.....

#### YEAR 1951

1.....	3.....	5.....	7.....	9.....
2.....	4.....	6.....	8.....	10.....

This list, published annually, describes all aids to navigation and fog signals maintained by or under the authority of the United States Coast Guard and the Dominion of Canada on the Great Lakes and the St. Lawrence River above St. Regis River. In this Light List there is also included, at the end, a list of unlighted buoys and daybeacons in the United States waters.

This list is not intended for use in navigation in the place of charts and should not be so used; the charts should be consulted for the location of all aids to navigation.

Other Light Lists published annually by the United States Coast Guard are as follows:

**Light List, Atlantic and Gulf Coasts of the United States**, describing aids to navigation in United States waters from St. Croix River, Maine, to the Rio Grande, including the United States West Indian Islands.

**Light List, Intracoastal Waterway**, describing aids to navigation in the Intracoastal Waterway and inside waters from Hampton Roads to the Rio Grande.

**Light List, Pacific Coast**, describing aids to navigation in United States waters on the Pacific Coast and on the coasts of Alaska and the Hawaiian and outlying Pacific Islands. For the convenience of mariners there are also included the lighted aids on the Coast of British Columbia maintained by the Canadian Government.

**Light List, Mississippi and Ohio Rivers**, describing aids to navigation on the Mississippi and Ohio Rivers and navigable tributaries.

The above-mentioned Light Lists are for sale by the Superintendent of Documents, Washington, D. C., and by sales agencies.

**Arrangement of list.**—The aids are listed in geographic order, beginning in the St. Lawrence River at St. Regis River, up the lakes and rivers, passing up the lakes to the head of navigation.

Names of aids are printed as follows:

#### Lake Coast Lights

#### RIVER, HARBOR, AND OTHER LIGHTS.

#### Radiobeacons and Distance-Finding Stations.

#### Unlighted Fixed Aids.

#### LIGHTSHIPS.

#### Other Floating Aids.

**Correction of Light List—Notices to Mariners.**—This light list is corrected to March 1, 1950. The mariner is cautioned that the latest list must be used. It is not practicable for the Coast Guard to correct individual copies, but Notices to Mariners are published during the period of navigation announcing all changes in aids to navigation.

**Local Notices to Mariners** are issued by the Commander, Ninth Coast Guard District, Cleveland, Ohio, and the Commanding Officer, Coast Guard Base, Sault Ste. Marie, Michigan, and include day to day changes and deficiencies in aids to navigation on the Great Lakes. These notices may be obtained, free of charge, by making application to the Commander, Ninth Coast Guard District, Keith Building, Cleveland 15, Ohio, indicating specifically the nature of your need.

**Weekly Notice to Mariners** is prepared jointly by the U. S. Coast Guard, Treasury Department, and the Hydrographic Office, Navy Department and published by the Headquarters of the Lakes Division, Branch Hydrographic Office, Cleveland, Ohio. It includes changes in aids to navigation for the Great Lakes

in assembled form as well as other general marine information useful to the mariner. This notice may be obtained, free of charge, by making application to the Branch Hydrographic Office, 518 Federal Building, Cleveland 14, Ohio.

The navigator should keep his Light List, as well as his charts, corrected from these Notices, and should consult all Notices issued after the date of publication of the list.

When its importance warrants, information concerning changes in aids to navigation is broadcast by radio.

Mariners are requested to bring to the immediate attention of the District Commander any apparent errors or omissions in this list.

Charts, etc., of the waters covered by this list are published as follows: Charts and Bulletins to supplement the information given upon the charts, by the United States Lakes Survey; charts of foreign portions by the United States Hydrographic Office; charts by the Department of the Naval Service of the Dominion of Canada; and charts by the Hydrographic Department of the British Admiralty.

Time of extinguishing lights in the winter and relighting them in the spring.—All lights of the United States on the northern lakes and rivers and adjacent navigable waters will be exhibited from sunset to sunrise at all seasons when vessels can enter the ports or are navigating in their vicinity. The dates of discontinuing and relighting lights will vary with the seasons, but care will be taken to exhibit lights whenever of use to navigators. Some of the lights are maintained throughout the year. The lightship and all lighted buoys are placed on their stations as early as practicable in the spring and are replaced by unlighted buoys in the fall when endangered by ice conditions.

Mariners are requested to report defects observed in aids to navigation direct to the Commander of the 9th Coast Guard District by the most prompt means available.

Messages may be sent by telegraph, collect, by telephone, or by mail. Reports may be sent free by radiotelephone on 2182 kc. or by radiotelegraph on 500 kc. to "COASTGUARD, CLEVELAND," or via commercial radio stations regular ship-to-shore radio-telephone service. A free direct wire telephone to SAULT STE. MARIE BASE, U. S. COAST GUARD, at the reporting window in the Look Office at the Soo is available for reporting defects in aids and other information of vital interest to the Coast Guard. To insure correct identification use official designation of aids as given in this list. Such cooperation will materially assist in the prompt remedying of defects and in the effective maintenance of the Coast Guard aids to navigation.

Aids to navigation in the United States waters of the Great Lakes and connecting waters are under the jurisdiction of the 9th Coast Guard District. Address: COMMANDER, 9TH COAST GUARD DISTRICT, KEITH BLDG., CLEVELAND 15, Ohio, day and night phone, MAIN 1-6900.

#### SUBOFFICES:

Buffalo, N. Y., north end Fuhrman Drive, P. O. Box 2010, day and night phone, Cleveland 2187.  
Cape Vincent, N. Y., day and night phone, Cape Vincent 118.  
Charlevoix, Michigan, day and night phone, Charlevoix 145.  
Chicago, Illinois, foot of Randolph Street, day and night phone, Superior 7-1342.  
Detroit, Michigan, foot of Mt. Elliott Street, day and night phone, Melrose 2840.  
Duluth, Minnesota, 1225 Lake Avenue, South, day and night phone, Melrose 121.  
Milwaukee, Wisconsin, 401 E. Greenfield Avenue, phone, Mitchell 5-2536.  
Sault Ste. Marie, Michigan, 337 Park Place, day and night phone, 2980, also U. S. Coast Guard phone at reporting window in Look Office.  
Sturgeon Bay, Wisconsin, day and night phone, Sturgeon Bay 1207.  
Toledo, Ohio, 3830 Lighthouse Drive, day and night phone, Pontiac 2673.

Recommendations as to aids to navigation, or their improvement, or reports of aids no longer needed, should be mailed to the district commander at Cleveland, or to the Commandant, U. S. Coast Guard, Washington, D. C.

Canadian lights and fog signals are under the charge of the Department of Transport, Ottawa, Canada. Any failure in Canadian aids should be immediately reported by letter to the Chief of Aids to Navigation, Department of Transport, Ottawa, Canada. Such letters may be mailed post free in Canada.

Laws for the protection of aids to navigation provide severe penalties.—It is unlawful to show any false light with intent to bring any vessel into danger or shipwreck, to interfere with any aid to navigation or to anchor any vessel in navigable waters of the United States so as to obstruct range lights, or to establish or maintain in the navigable waters of the United States any aid to navigation similar to those maintained by the U. S. Coast Guard without first obtaining permission from the Commandant, U. S. Coast Guard.

Collisions of vessels with lightships, buoys, or other aids to navigation.—Whenever any vessel collides with an aid to navigation established and maintained by the United States or any private aid to navigation established and maintained under regulations issued by the Secretary of the Treasury, or is connected with any such collision, it shall be the duty of the person in charge of such vessel to report the accident to the nearest Officer in Charge, Marine Inspection, of the Coast Guard (sec. 136.05 of title 46 of the Code of Federal Regulations). Any person who neglects or refuses to submit such report within a reasonable time shall incur a penalty of \$100 (33 U. S. C. 361), or shall be subject to suspension or revocation of his license.

Bearings are in degrees true, reading clockwise from 0° at N.; bearings relating to visibility of lights are as observed from a vessel. Distances are in statute miles unless otherwise stated.

Heights and depths are referred to standard low water.

Watched lights.—All watched lights are displayed from sunset until sunrise and due to locations where twilight is prolonged with low visibility may be displayed for a short period before sunset and after sunrise.

Unwatched lights.—"U" after the name of a light indicates that the light is unwatched. All lighted buoys are unwatched. Unwatched lights may become irregular or extinguished, although such apparatus has a high degree of reliability.

Reliance must not be placed on floating aids maintaining their exact positions; in cases of uncertainty it is safer to navigate by bearings or angles to fixed objects on shore, and by the use of soundings.

Latitudes and longitudes in this List are approximate, and are only intended to facilitate reference to a chart.

Character of lights.—To avoid confusion, lights are given distinct characteristics; these are indicated by abbreviations, as shown on the following page.

Lights are referred to as flashing when the light period is shorter than the dark period, and as occulting when the light period is equal to or longer than the dark period.

In approaching a light of varying intensity, such as fixed varied by flashes, or alternating white and red, due allowance must be made for the inferior brilliance of the less powerful part of the light. The first-named light may, on account of distance or haze, show flashes only and the true characteristic will not develop until the observer comes within range of the fixed light; similarly the second-named may show as occulting white until the observer comes within range of the red light.

At short distances and in clear weather flashing lights may show a faint continuous light.

Period of a flashing or occulting light is the time required to go through the full set of changes.

Miles seen.—The distances at which lights may be seen in exceptionally clear weather are the geographic ranges computed in statute miles for a height of the observer's eye of 15 feet above lake level; the luminous range is given when the light is not of sufficient power to be seen to the limit of its geographic range. These distances may at times be increased by abnormal atmospheric refraction, and of course may be greatly lessened by unfavorable weather conditions, due to fog, rain, haze, or smoke. All except the most powerful lights are easily obscured by such conditions.

Under certain atmospheric conditions, especially with the more powerful lights, the glare of the light may be visible beyond the computed geographic range. When approaching a high-power light it obviously may be seen earlier from aloft.

The table following gives the approximate geographic range of visibility for an object which may be seen by an observer whose eye is at lake level; in practice, therefore, it is necessary to add to these a distance of visibility corresponding to the height of the observer's eye above lake level.

## CHARACTERISTIC LIGHT PHASES

Illustration	Symbols and meaning		Phase description
	Lights which do not change color	Lights which show color variations	
	F.—Fixed.....	Alt.—Alternating.	A continuous steady light.
	F. Fl.—Fixed and flashing.	Alt. F. Fl.—Alternating fixed and flashing.	A fixed light varied at regular intervals by a flash of greater brilliance.
	F. Gr. Fl.—Fixed and group flashing.	Alt. F. Gr. Fl.—Alternating fixed and group flashing.	A fixed light varied at regular intervals by groups of 2 or more flashes of greater brilliance.
	Fl.—Flashing.	Alt. Fl.—Alternating flashing.	Showing a single flash at regular intervals, the duration of light always being less than the duration of darkness. Shows not more than 30 flashes per minute.
	Gr. Fl.—Group flashing.	Alt. Gr. Fl.—Alternating group flashing.	Showing at regular intervals groups of 2 or more flashes.
	Qk. Fl.—Quick flashing.		Shows not less than 60 flashes per minute.
	I. Qk. Fl.—Interrupted quick flashing.		Shows quick flashes for about 4 seconds, followed by a dark period of about 4 seconds.
	S-L. Fl.—Short-long flashing.		Shows a short flash of about 0.4 second, followed by a long flash of 4 times that duration.
	Occ.—Occulting.	Alt. Occ.—Alternating occulting.	A light totally eclipsed at regular intervals, the duration of light always equal to or greater than the duration of darkness.
	Gr. Occ.—Group occulting.		A light with a group of 2 or more eclipses at regular intervals.

Light colors used and abbreviations: W—white, R—red, G—green.

## Distances of visibility for objects of various elevations above lake level

Height, in feet	Distance, in statute miles	Height, in feet	Distance, in statute miles	Height, in feet	Distance, in statute miles	Height, in feet	Distance, in statute miles
5	2.9	65	9.8	150	18.8	450	28.0
10	4.2	80	10.2	170	19.1	500	29.5
15	5.1	95	10.6	180	20.0	550	31.0
20	5.9	110	11.0	190	20.6	600	32.3
25	6.6	125	11.4	200	21.2	650	33.7
30	7.2	140	11.8	210	21.7	700	34.9
35	7.8	155	12.2	220	22.0	750	36.0
40	8.2	170	12.5	230	22.3	800	36.9
45	8.5	185	12.8	240	22.5	850	37.7
50	8.8	200	13.2	250	22.7	900	38.4

Candlepowers of lights are approximate and are stated in English candles. When the power of a light varies, as in the case of a white light with a red sector, or a fixed light varied by flashes, the candlepower of both white and red, or fixed light and flash, is given. From the stated candlepowers the mariner may judge of the relative brilliancy and power of the various lights.

Light sectors.—In some conditions of the atmosphere white lights may have a reddish hue; the mariner, therefore, should not trust solely to color where there are sectors, but should verify the position by taking a bearing of the light. On either side of the line of demarcation between white and a colored sector there is always a small sector of uncertain color, as the edges of a sector cannot be cut off sharply.

When a light is cut off by adjoining land, and the arc of visibility is given, the bearing on which the light disappears may vary with the distance of the vessel from which observed.

## FOG SIGNALS

Radiobeacons broadcast simple dot and dash combinations by means of transmitter emitting modulated continuous waves.

Diaphones produce sound by means of a slotted reciprocating piston actuated by compressed air. Blasts may consist of two tones of different pitch in which case the first part of the blast is high and the last of a low pitch. These alternate pitch signals are called "two-tone."

Diaphragm horns produce sound by means of a diaphragm vibrated by compressed air, steam, or electricity. Duplex or triplex horn units of differing pitch produce a double signal.

Reed horns produce sound by means of a steel reed vibrated by compressed air. Sirens produce sound by means of either a disc or a cup-shaped rotor actuated by compressed air, steam, or electricity.

Whistles produce sound by compressed air or steam emitted through a circumferential slot into a cylindrical bell chamber.

Bells are sounded by means of a hammer actuated by hand, by a descending weight, compressed gas, or electricity.

Mariners are cautioned that the hearing of fog signals sounded in air, except the radiobeacon, cannot be implicitly relied upon and that the lead should never be neglected.

The various types of fog signals differ in tone, and this facilitates the recognition of the respective stations; the type of fog signal apparatus is stated for each station.

Experience teaches:

That distances must not be judged only by the power of the sound.

That occasionally there may be areas close to a fog signal in which it is not heard, and, that the mariner must not assume that a signal is not sounding because he does not hear it.

That a fog may exist not far from a station and yet not be seen from it, so that the signal may not be in operation.

Bells at light stations are operated by clockwork, unless otherwise stated.

Effort is made in all cases to start fog signals as soon as possible after fog has been observed, but there may be some delay depending on the type of equipment in use.

Whistles, gongs, or bells on buoys operated by the action of the sea sound irregularly, and in calm weather are less effective or may not sound.

## LIGHTSHIPS

Lightships under way, or off station, will fly the International Code signal letters "PC" (signifying lightship is not at anchor on her station).

All lightships on stations and all vessels relieving station ships will display the International Code signal of the station whenever a vessel is approaching or in the vicinity and there are indications that such vessel is in strange waters or fails to recognize the station, or when the vessel asks for the information.

The International Code signal for each lightship station is stated in this list.

Lightships, where so stated, carry riding lights for the purpose of showing in which direction the ship is riding.

## BUOYS

## Significance of shapes, coloring, numbering, light characteristics, etc.

**Shapes.**—(a) Lighted buoys are not at present uniformly differentiated as to shape, with respect to the side of the channel; they have bodies which contain the batteries or gas tanks, and are usually surmounted by skeleton superstructures with lanterns; combination buoys have both light and bell, light and gong, or light and whistle.

(b) Unlighted buoys.—Entering from seaward, spar or conical nun buoys are placed on the right or starboard side of the channel. Spar or cylindrical can buoys are placed on the left or port side.

In general, obstruction and fairway or midchannel buoys have no distinctive shape. When it is desired to indicate which of two channels is preferable in the case of buoys marking obstructions, middle grounds, or junctions of channels, a can buoy is used when the more important or preferable channel is to the right as approached from seaward, and a nun buoy when the preferable channel is to the left. These buoys may be left on either side with due caution as to the position of the buoy with relation to the obstruction as shown on the chart. Midchannel or fairway buoys placed in good water and designed to be passed close to on either side may be any shape.

**Colors.**—Buoys are painted black where used to mark the port and red to mark the starboard side of channels respectively. Where used to mark middle grounds, junctions, or obstructions which may be passed on either side, buoys are painted with red and black horizontal bands; the top band is red or black accordingly as the preferred or more important channel is to the left or right of the buoy position. Where used to mark obstructions that are to be passed on only one side, buoys are painted black if placed on the port side of the channel or red if placed on the starboard side of the channel. (Midchannel) buoys are painted with black and white vertical stripes.

**Numbers.**—Red buoys bear even numbers and black buoys odd numbers, the numbers for each increasing from seaward. The numbers are kept in approximate sequence on the two sides of channels by omitting numbers as required. Numbers are not assigned to horizontally banded or vertical striped (part-colored) buoys. The latter, in some cases, may be lettered for the purpose of identification.

**Arbitrary coloring and numbering.**—For the coloring and numbering of buoys along the coasts and along traffic routes not leading from seaward or toward headwaters, assumptions are necessary, the principal of which are the following: Proceeding in a southerly direction along the Atlantic coast and in a northerly and westerly direction along the Gulf coast will be considered as proceeding from seaward and accordingly coastal buoys on the starboard hand are red in color. Proceeding northerly along the Pacific coast is similarly considered and accordingly coastal buoys are red. Proceeding northerly and westerly on the Great Lakes is considered as proceeding to headwater and coastal buoys are colored accordingly. Proceeding along the Intracoastal Waterway in a general southerly direction along the Atlantic coast and in a general westerly direction along the Gulf coast is considered as proceeding from seaward and buoyage is colored to agree.

**Light colors.**—Red or white lights are placed on the right or starboard side of a channel for the entering vessels, and white or green lights on the left or port side. White lights may be on either side of the channel, but colored lights are only on the sides indicated respectively. Where a distinction is desired between the aids on the same side of the channel, it is as a rule accomplished by variations of characteristics rather than by the use of different colors.

## BUOYAGE OF THE UNITED STATES

## COLOR, SHAPE AND LIGHT CHARACTERISTICS IN RELATION TO LOCATION AND USE

Note: Where the terms PORT & STARBOARD are used they are as seen by a vessel proceeding from seaward. For complete details see Introduction, LIGHT LIST.


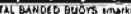
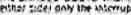
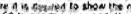
## 1. LIGHTED BUOYS:

These buoys have no shape characteristic. Painting, colors and numbering same as unlighted buoys. (See II below)

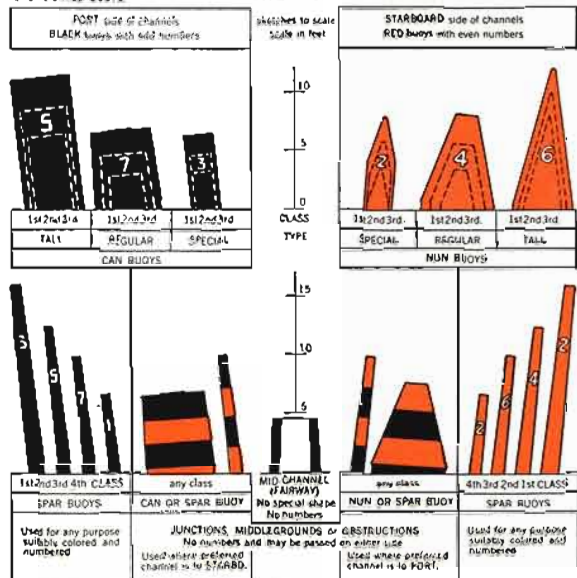
## LIGHT COLORS:

- (a) RED lights are used only on STARBOARD side of channels.
- (b) GREEN lights are used only on PORT side of channels.
- (c) WHITE lights may be used on either side of channels and are always used on MID-CHANNEL (vertical striped) buoys.
- (d) WHITE, RED or GREEN lights may be used on buoys marking JUNCTIONS, MIDDLEGROUNDS or OBSTRUCTIONS which may be passed on either side, as follows:
  - WHITE, unless desired to show a preferred channel.
  - RED if preferred channel is to PORT.
  - GREEN if preferred channel is to STARBOARD.

## LIGHT PERIODS:

- (a) On SOLID COLOR BUOYS (marking the sides of channels) flashes or occultations occur at regular intervals, thus: 
- (b) On HORIZONTAL BANDED BUOYS marking JUNCTIONS, MIDDLEGROUNDS or OBSTRUCTIONS which may be passed on either side, only the interrupted quick flash is used, thus: 
- (c) On buoys where it is desired to show the need of particular caution as at important turns etc., the quick flash (not less than 60 in per min.) is used, thus: 
- (d) On VERTICAL STRIPED BUOYS (marking mid-channel or fairway) WHITE lights showing groups of short-long flashes are used, thus: 

## 11. UNLIGHTED BUOYS:



## 11. SPECIAL PURPOSE BUOYS:

- (a) QUARANTINE buoys—YELLOW
- (b) ANCHORAGE buoys—WHITE
- (c) BREAKING buoys—WHITE (GREEN TOP)
- (d) BELL & GONG buoys have flat top with skeleton framework. WHISTLE buoys are usually conical

Note: (a) Buoyage conforms to statutory provisions and recommendations of Int'l Marine Conference 1939 Wash., D.C.  
COMMERCIAL U. S. COAST GUARD  
WASH., D. C.

In the case of buoys used to mark obstructions, middle grounds, or junctions of channels, white lights are used except when it is desired to indicate the side on which it should be passed, in which case the light will be green when the preferred channel is to the right as approached from seaward and red when the preferred channel is to the left. Midchannel buoys show white lights.

**Light characteristics.**—(a) **Solid color buoys.**—Lights on red buoys or black buoys, if not fixed, will always be regularly flashing or regularly occulting, the light and dark periods both remaining unchanged. For ordinary purposes the rate of light flashes will be (slow flashing) not more than 30 per minute. For purposes where it is desired that lights have a distinct cautionary significance, as at sudden constrictions or sharp turns in fairways or channels, or wrecks to be passed on only one side, the rate of light flashes will be not less than 60 per minute (quick flashing).

(b) **Parti-colored buoys.**—Lights on buoys painted with red and black horizontal bands will always be a series of quick flashes interrupted by eclipses about 8 times per minute. This characteristic is known as the interrupted quick flash.

Lights on buoys painted with black and white vertical stripes will always be flashing white, a short flash and a long flash, this combination recurring at the rate of about six to eight times per minute. This characteristic is known as the short-long flash.

**Guiding principles.**—It will be noted that in the preceding assignment of colors and characteristics, the following simple and easily remembered principles have been followed:

- (a) Solid color buoys show regularly recurring flashes of uniform length.
- (b) Parti-colored buoys show group flashing characteristics.
- (c) The quick-flash is of a distinctly cautionary significance.
- (d) Lights on wreck marking buoys will always show cautionary characteristics, quick flashing on red or black buoys, interrupted quick flashing on horizontal banded buoys.

**Bell Buoys** have a flat topped float with skeleton superstructure supporting a bell. **Gong Buoys** have a flat float with skeleton framework supporting a series of three or four gongs of varied tone. **Whistle Buoys** are usually conical, with whistle at top. **Span Buoys** are long slender buoys of wood or iron.

**Station Buoys**, colored the same as the regular aids, are placed alongside of lightships and important buoy stations to mark them in case the regular aid is carried away. Lightship station buoys bear the letters "LS" above the initials of the station.

**Special purpose buoys.**—Buoys for special purposes which have no lateral significance are as follows:

- (a) White buoys—mark anchorage areas.
- (b) Yellow buoys—mark quarantine anchorage areas.
- (c) White buoys with green tops—used in connection with dredging and survey operations.
- (d) White and black alternate horizontally banded buoys—mark fish net areas.
- (e) White and international orange buoys alternately banded, either horizontally or vertically—for special purpose to which neither the lateral system colors nor the other special purpose colors apply.
- (f) Yellow and black vertically striped buoys—for seadrome markings and have no marine significance.

**Caution regarding buoys.**—Buoys are liable to be carried away, shifted, capsized, sunk, etc.; lighted buoys may be extinguished, or whistle or bell buoys may not sound, as the result of storm, the accumulation of ice, running ice, or other natural causes, or collision, or other accidents.

Coast Guard tenders when working on buoys in channels or other frequented waters may display a red flag (international signal-code letter "B") and a black ball at the fore, as a warning to other vessels to slow down in passing. Passing vessels will facilitate the work of the Coast Guard by a proper observance of the signals.

**Daybeacons** are constructed and distinguished with special reference to each locality. Daybeacons on the sides of channels are colored to conform to the coloring of buoys.

Reflectors are placed on some buoys and daybeacons to enable the navigator, using a searchlight, to readily locate such aids.

**Aids privately maintained.**—United States aids listed in this list as maintained by other than the Coast Guard are authorized by the Commandant, U. S. Coast Guard.

They are carried in this list in order that confusion due to features of similarity with aids maintained by the Coast Guard may be avoided.

Abbreviations designating the order or internal diameter of illuminating apparatus and kind of illuminants, etc.:

- 1 = 1st order.
- 2 = 2d order.
- 3 = 3d order.
- 3½ = 3½ order.
- 4 = 4th order.
- 5 = 5th order.
- 6 = 6th order.

Rg = range lens.

Rf = reflector.

DL = doublet lens.

DfR = doublet lens with reflector.

Hl = hand lantern.

Ll = lens lantern.

Pl = post lantern.

a = acetylene gas, compressed.

C = Canadian.

cp = candlepower.

e = electric.

lov = incandescent oil vapor.

M = Mississippi River type buoy.

m = mantle.

mm = millimeter.

o = oil in regular service lamp.

s = special buoy.

EXAMPLES: "4 lov" = 4th-order lens with incandescent oil-vapor lamp; "200 mm a" = 200-millimeter lens with acetylene gas.

### RADIOBEACONS

Radiobeacons are the most valuable fog signals, and are also available for navigation in clear weather.

In plotting long-range bearings on a chart of the Mercator projection a correction must be made, as the line of bearing is not a straight line except in the meridian.

**Transmitting power.**—Class B = reliable average range of 100 miles (50 to 150); class C = reliable average range of 20 miles (15 to 25); Class D (marker radiobeacon) = reliable average range of 10 miles (5 to 15). This classification principally indicates relative power of stations, since the actual useful range may vary considerably from that indicated with some types of radio direction finders. With average radio receiving conditions and without excessive "atmospherics," any direction finder maintained in proper condition should be able to obtain a 6° or smaller minimum signal swing at the distance shown for each classification of station.

**For station identification** simple characteristics consisting of combinations of dots and dashes are used. These combinations and the length of the dots, dashes, and spaces are chosen for ease of identification when heard by the ship's navigating officer who is not expected to be skilled in radiotelegraphy. They are not transmitted as code letters and are not referred to as such, but as: 2 dashes (— —), 2 dashes dot (— — •), 4 dashes (— — — —), etc., depending on the combination used. Certain low-power radiobeacons use combinations of high and low-tone dashes to provide additional distinction in their characteristic. The characteristic of marker radiobeacons (Class D) is composed of groups or series of dashes or a continuous signal for part of a 30-second cycle which is followed by a silent period to complete the 30-second cycle.

**Operating Schedule.**—Radiobeacons operate during fog or low visibility. Also in clear weather during the intervals shown on chart facing page 12, except marker radiobeacons which, being unattended, operate continuously on a 30-second period, regardless of weather conditions.

**Note.**—Certain radiobeacons have been modified to operate for 66 seconds, silent 120 seconds, throughout the hour and to transmit with the station characteristic code superimposed on a continuous carrier. (See footnote on page 16.) This operation is for the purpose of extending the usefulness of marine radiobeacons to aircraft and ships employing automatic radio direction finders. Craft employing the conventional "aural null" direction finders will notice no change in quality of service, and in addition will be able to use these radiobeacons at any time in their assigned sequence throughout the hour.

**Special operation of radiobeacon stations for calibration of direction finders.**—United States radiobeacons will broadcast for the purpose of enabling vessels to calibrate their radio direction finders upon request. If it is not practicable to determine the time of calibration sufficiently in advance to contact the District Office, or if the calibration is desired from a remote station where communication is difficult, request may be made directly to the station by means of telephone, telegraph, or a whistle signal consisting of three long blasts followed by three short blasts. This whistle signal to be repeated until same is acknowledged by the station through the starting of the transmitter. The same group of signals will be sounded at the termination of calibration. If attention of station or lightship is not attracted by the whistle signals, hoist the international code signal, J over K, to indicate request for radio direction finder calibration.

The work of station or lightship personnel is not confined to standing watch and there may be times when the whistle request for calibration is not immediately heard, due to the noise from operating station machinery, etc. Usually, a repeated signal not too far from the station will attract attention.

Transmission for calibration purposes will be continuous without the 2-minute silent interval unless another station in the same frequency group is in operation at the time, in which case calibration operation will be "1 minute on, 2 minutes off." No continuous transmission for calibration will be undertaken during regularly scheduled periods of operation.

**Radiobeacon charts of a size suitable for posting in the pilot house of vessels or elsewhere near the radio direction finder, are issued to vessels on requests addressed to the Commander, 9th Coast Guard District, Cleveland 15, Ohio, or to the Commandant, U. S. Coast Guard, Washington, D. C.** These charts show the general location of the radiobeacons, their operating codes, frequencies, power, and schedules, as well as the grouping and sequence of operation. These charts, published by the Coast Guard for the Atlantic and Gulf Coasts, the Pacific Coast, and the Great Lakes, are convenient for quick reference.

**Distance-finding stations.**—At the stations listed on pages 17 to 19 the radiobeacon and sound signals are synchronized for distance finding. Whenever the sound signal is operating a group of two radio dashes, a short and long, 1 second and from 3 to 5 seconds, respectively, is transmitted every 3 minutes at the end of the radiobeacon minute of operation. A group of two sound signal blasts of corresponding length is sounded at the same time. When within audible range of the sound signal, navigators on vessels with radio receivers capable of receiving the radiobeacon signals may readily determine their distance from the station by observing the time in seconds which elapses between hearing any part of the distinctive group of radio dashes, say the end of the long dash, and the corresponding part of the group of sound blasts, say the end of the long blast, and dividing the result by 5 for statute miles. The error of such observation should not exceed 10 percent.

The 1-second dash preceding the long dash is a stand-by or warning signal as is also the 1-second blast. The latter serves as an identification signal to assure the observer that he is taking time on the correct sound signal blast.

For observations on aerial sound signals a watch with second hand is all that is needed, although a stop watch is more convenient.

Observations for distance off at these stations are not restricted to vessels with direction finders, but may be made by any vessel having a radio receiver capable of receiving in the band 285 to 315 kilocycles within which radiobeacons are operated. A loud speaker is desirable although not necessary.

The time relation of these signals at stations where synchronization is now effective is shown diagrammatically in the tables on pages 17 to 19. Example of the use of these synchronized signals is as follows: In the case of Lausung Shoal Light Station, if the interval between hearing the end of the long radio dash marking the end of the radiobeacon minute and the end of the long (5-second) blast of the diaphone is 30 seconds, the observer is 30 ÷ 5 = 6 miles from the station.

Caution must be used in approaching radiobeacons on radio bearings, and care must be taken to set courses to pass safely clear. The risk of collision will be avoided by insuring that the radio bearing does not remain constant. This caution is applicable to those lightships and stations on submarine sites which are passed close to.

**Dial settings of radio direction finders.**—To avoid interference, it is important to determine and record correct dial settings for each station and to adhere to them.

**Reporting of radiobeacon interference from other Government stations.**—Interference may result from either distant radiobeacons or from other Government radio stations operating on or near the same frequency. Any vessels observing radiobeacon interference should promptly report same to the Commander, 9th Coast Guard District, Cleveland 15, Ohio, or to the Commandant, U. S. Coast Guard, Washington, D. C. Include in such reports information regarding the date, time, identifying characteristic, strength of the interfering signals, and vessel's position. These interference reports are important and cooperation from the mariner in this respect will assist the Coast Guard in improving the radiobeacon service.

**Accuracy and use of bearings.**—Long experience with properly installed and correctly calibrated direction finders maintained in good condition indicates an average accuracy of 1° to 2°. Departures from this accuracy will sometimes be experienced when taking bearings from the position close to the shoreline and over land. Night effect, which is sometimes encountered, particularly near sunrise

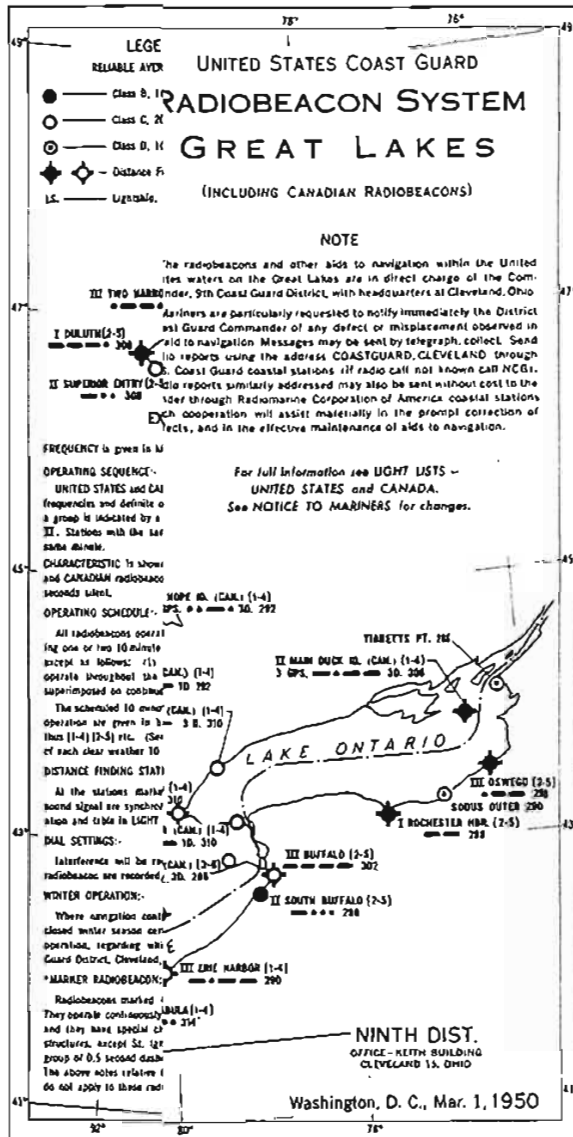


and sunset, and which is usually manifested in very wide or changing minimum, tends to limit the distance at which reliable bearings can be obtained. In observing marine radiobeacons, night effect is not usually encountered at distances less than 30 to 50 miles. The existence of night effect can almost invariably be confirmed by rapidly taking repeated bearings and when shown to be present bearings should be used with extreme caution. Serious errors may result in bearings taken if other shipboard antennas are erected close to the direction finder after calibration or if the direction finder, ship's rigging, or other equipment affecting direction-finder performance is not maintained in the condition existing at the time of last calibration. Regular and frequent use of the direction finder under all conditions is one of the best means of insuring ability to obtain accurate bearings and that the direction finder is at all times in proper condition. Clear weather operating periods provide ample opportunity for such use. Full use should be taken of the opportunity for fixing position by cross bearings on two or more radiobeacons which is provided through the convenient arrangement of stations as to frequency and sequence of operation and in most cases their favorable geographic location.

**Warning of fog.**—Hearing the groups of short (1-second) and long (5-second) dashes of the radiobeacon, at stations where the radiobeacon and sound signals are synchronized for distance finding, is an indication that there is fog in the vicinity of the station and that the sound signal is operating.

#### RADAR

Some aids to navigation are equipped with special devices known as "radar reflectors" to increase their radar echo.



**RADIOBEACONS OPERATED BY THE U. S. COAST GUARD AND THE  
CANADIAN DEPARTMENT OF TRANSPORT**

[Latitudes and longitudes of U. S. stations are location of antenna lead-in.]

[When operating, all stations transmit their characteristic signal for a period of 1 minute,  
recurring every 3 minutes.]

[For details of operation, method of distance finding, etc., see notes on p. 10]

Lat. N.	Station	Long. W.	Operate on—		Signal characteristic transmitted
			Kilo-cycles	Power	
<b>LAKE ONTARIO</b>					
44 00.0	TIMMETS POINT LIGHT STATION, <sup>1</sup> N. Y.	76 22.2	286	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
43 55.9	MAIN DUCK ISLAND LIGHT STATION, CAN.	76 38.3	306	B	— — — — — 3 times
43 28.4	OSWEGO WEST PIERHEAD LIGHT STATION, N. Y.	76 31.0	298	B	• — — — —
43 16.6	SODUS OUTER LIGHT STATION, <sup>1</sup> N. Y.	76 58.5	290	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
43 15.5	ROCHESTER HARBOR LIGHT STATION, N. Y.	77 36.3	298	B	— — — — —
43 36.8	GIBRALTAR POINT LIGHT STATION, CAN.	79 23.2	310	C	— • — — —
43 14.2	PORT WELLER LIGHT STATION, CAN.	79 18.1	310	C	— • • — — — 3 times
43 18.1	BURLINGTON BAY LIGHT STATION, CAN.	79 47.4	310	C	— • — — — 3 times
<b>LAKE ERIE</b>					
42 52.7	BUFFALO LIGHT STATION, N. Y.	78 53.9	302	C	— — — — —
42 50.0	SOUTH BUFFALO SOUTH SIDE LIGHT STATION, N. Y.	78 52.1	298	B	— • • • •
42 52.1	PORT COLBORNE INNER LIGHT STATION, CAN.	79 15.2	286	C	— — — • • 3 times
42 33.0	LONG POINT LIGHT STATION, CAN.	80 03.8	286	B	— • — • • 3 times
42 09.3	ERIE HARBOR PIERHEAD, PA.	80 04.4	290	C	— • — — —
41 55.1	ASHTABULA LIGHT STATION, OHIO.	80 47.8	314	B	— — — — •
41 46.1	FAIRPORT WEST BREAKWATER LIGHT STATION, <sup>1</sup> OHIO.	81 16.9	300	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
41 30.5	CLEVELAND WEST PIERHEAD LIGHT STATION, OHIO.	81 43.1	314	B	— • • • •
41 49.7	SOUTHEAST SHOAL LIGHT STATION, CAN.	82 27.7	286	B	• • • • • 3 times
41 29.3	SANDUSKY BAY (CEDAR POINT), OHIO.	82 41.6	314	B	— — — — —

<sup>1</sup>Marker radiobeacon operates continuously.

## Radiobeacons operated by the U. S. Coast Guard and the Canadian Department of Transport—Continued

Lat. N.	Station	Long. W.	Operate on—		Signal characteristic transmitted
			Kilo-cycles	Power	
<b>LAKE ERIE</b>					
	TOLEDO HARBOR LIGHT STATION, OHIO.....		292	C	— — — • •
41 45.7		83 19.7			
	AMHERSTBURG OUTER CHANNEL LIGHTED RADIO-BEACON BUOY 1, <sup>1</sup> MICH.		296	D	2 gps. ¼ sec. dashes repeated for 15¼ sec., silent 14¼ sec.
41 57.8		83 07.6			
	DETROIT RIVER LIGHT STATION, MICH.....		304	C	— — — —
42 00.1		83 08.5			
<b>LAKE HURON</b>					
	LAKE HURON LIGHT SHIP, MICH.....		304	B	— — — —
43 03.6		82 26.1			
	HARBOR BEACH LIGHT STATION, MICH.....		304	B	• • — —
43 50.8		82 37.9			
	GODERICH, CAN.....		298	C	• — — • •
43 44.8		81 43.9			3 times
	PORT AUSTIN, <sup>1</sup> MICH.....		312	D	— — — —
44 02.9		82 59.7			
	GRAVELLY SHOAL, <sup>1</sup> MICH.....		296	D	Gp. 0.5 sec. dashes for 15.5 sec. silent 14.5 sec.
44 01.2		83 32.3			
	ALPENA LIGHT STATION, <sup>1</sup> MICH.....		308	D	
45 03.6		83 25.4			
	THUNDER BAY ISLAND LIGHT STATION, MICH.....		286	B	— — • •
45 02.2		83 11.6			
	POE REEF LIGHT STATION, MICH.....		302	B	• — — —
46 41.7		84 21.7			
	ROUND ISLAND PASSAGE LIGHT STATION, MICH.....		302	C	— • • •
45 50.6		84 36.9			
	MACKINAC ISLAND, <sup>1</sup> MICH.....		310	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
45 51.5		84 38.9			
	OLD MACKINAC POINT LIGHT STATION, MICH.....		314	C	— — — —
45 47.3		84 43.8			
	ST. IGNACE, <sup>1</sup> MICH.....		306	D	Two 5-sec. dashes every 30 sec.
45 52.1		84 43.3			
	DETOUR REEF LIGHT STATION, MICH.....		286	B	— — — —
45 57.0		83 54.2			
	COVE ISLAND LIGHT STATION, CAN.....		292	B	— — — • •
45 19.7		81 44.2			3 times
	HOPE ISLAND LIGHT STATION, CAN.....		292	C	• • — —
44 54.8		80 10.0			3 times
	OWEN SOUND RANGE FRONT LIGHT STATION, CANADA.		292	C	— — — —
44 34.7		80 56.3			3 times
<b>LAKE SUPERIOR</b>					
	GROR CAP REEFS LIGHTSHIP, CAN.....		308	C	• • • •
46 31.1		84 37.6			3 times

<sup>1</sup> Marker radiobeacon operates continuously.<sup>1</sup> Marker radiobeacons operate continuously and are synchronized so that one will transmit during the silent period of the other.

## Radiobeacons operated by U. S. Coast Guard and the Canadian Department of Transport—Continued

Lat. N.	Station	Long. W.	Operate on—		Signal characteristic transmitted
			Kilo-cycles	Power	
<b>LAKE SUPERIOR</b>					
	WHITEFISH POINT LIGHT STATION, MICH.....		286	B	— — — — •
46 46.3		84 57.3			
	MARQUETTE LIGHT STATION, MICH.....		302	B	• — — —
46 32.8		87 22.6			
	PESQUE ISLE HARBOR, <sup>1</sup> MICH.....		310	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
46 34.4		87 22.3			
	HURON ISLAND LIGHT STATION, MICH.....		314	C	— — — —
46 57.8		87 59.9			
	MANITOU LIGHT STATION, MICH.....		302	B	— — — —
47 25.2		87 35.2			
	EAGLE HARBOR LIGHT STATION, MICH.....		314	B	• — — —
47 27.7		88 09.5			
	KEWEENAW UPPER ENTRANCE LIGHT STATION, MICH.		294	B	— • — •
47 13.6		88 37.8			
	PASSAGE ISLAND LIGHT STATION, MICH.....		302	B	— — • •
48 13.4		88 21.0			
	ROCK OF AGES LIGHT STATION, MICH.....		286	C	— — — • •
47 52.0		89 18.8			
	LA POINTE LIGHT STATION, WIS.....		314	B	— — — —
46 43.7		90 47.1			
	DEVILS ISLAND LIGHT STATION, WIS.....		286	B	— — — —
47 04.8		90 43.7			
	SUPERIOR ENTRY SOUTH BREAKWATER LIGHT STATION, WIS.		308	C	— • • •
46 42.6		92 00.4			
	DULUTH SOUTH BREAKWATER OUTER LIGHT STATION, MINN.		308	B	— — — • •
46 46.8		92 05.3			
	TWO HARBORS LIGHT STATION, MINN.....		308	C	• — — •
47 00.8		91 39.7			
	ANGOUS ISLAND LIGHT STATION, CAN.....		298	B	• • • •
48 14.2		89 00.4			3 times
	SLATE ISLANDS LIGHT STATION, CAN.....		292	B	— — • • •
48 37.3		86 59.8			3 times
	MICHIGOTEN ISLAND EAST END LIGHT STATION, CAN.		292	B	— — — • •
47 45.3		85 35.8			3 times
	MICHIGOTEN HARBOR LIGHT STATION, CAN.....		298	C	• — — •
47 56.6		84 54.4			3 times
	CARIBOU ISLAND LIGHT STATION, CAN.....		292	C	• — — •
47 20.4		85 49.5			3 times
<b>LAKE MICHIGAN</b>					
	GRAYS REEF LIGHT STATION, MICH.....		296	B	— • • •
45 46.0		85 09.2			
	NORTH MANITOU SHOAL LIGHT STATION, MICH.....		308	C	• etc.
45 01.3		85 57.4			
	POINT BETSIE LIGHT STATION, MICH.....		290	B	• — — •
44 41.5		86 15.3			

<sup>1</sup> Marker radiobeacon operates continuously.

Radiobeacons operated by U. S. Coast Guard and the Canadian Department of Transport—Continued

Lat. N.	Station	Long. W.	Operate on—		Signal characteristic transmitted
			Kilo-cycles	Power	
<b>LAKE MICHIGAN</b>					
	FRANKFORT NORTH BREAKWATER LIGHT STATION, MICH.		290	C	• • • •
	44 37.8	86 14.6			
	LUDINGTON NORTH BREAKWATER LIGHT STATION, MICH. <sup>1</sup>		302	B	— — — —
	43 57.8	86 27.6			
	MUSKEGON PIERHEAD LIGHT STATION, <sup>2</sup> MICH.		302	B	• • • •
	43 13.7	86 20.5			
	GRAND HAVEN PIERHEAD RANGE FRONT LIGHT STATION, MICH.		314	C	• — — —
	43 03.5	86 15.4			
	CALUMET HARBOR LIGHT STATION, ILL.		286	B	— • • •
	41 44.3	87 30.5			
	CHICAGO HARBOR LIGHT STATION, ILL.		286	B	• — • •
	41 53.4	87 35.4			
	MILWAUKEE BREAKWATER LIGHT STATION, Wis.		286	B	— — — —
	43 01.6	87 52.0			
	SHEROQUAN, <sup>1</sup> Wis.		204	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
	43 45.0	87 42.1			
	MANITOWOC BREAKWATER LIGHT STATION, <sup>1</sup> Wis.		302	C	— — — —
	44 05.6	87 38.0			
	KEWAUNEE PIERHEAD LIGHT STATION, Wis.		314	C	— — — •
	44 27.5	87 29.5			
	STURGEON BAY CANAL LIGHT STATION, Wis.		200	C	— — — •
	44 47.7	87 15.7			
	PLUM ISLAND RANGE REAR LIGHT STATION, Wis.		312	C	— — — etc.
	45 18.5	86 57.5			
	SHERWOOD POINT LIGHT STATION, <sup>1</sup> Wis.		298	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
	44 53.6	87 26.0			
	GREEN BAY HARBOR ENTRANCE LIGHT STATION, Wis.		314	C	— • • •
	44 39.2	87 54.1			
	MENOMINEE PIERHEAD RANGE FRONT LIGHT STATION, <sup>1</sup> Wis.		286	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
	45 05.7	87 35.1			
	CHAMBERS ISLAND LIGHT STATION, <sup>1</sup> Wis.		304	D	5 sec. dash ev. 15 sec.
	45 12.1	87 21.9			
	ST. MARTIN ISLAND LIGHT STATION, MICH.		308	C	— • • • •
	45 30.2	86 45.5			
	MINNEAPOLIS SHOAL LIGHT STATION, MICH.		308	C	— — — —
	45 34.8	86 59.9			
	MANISTIQUE LIGHT STATION, MICH.		296	C	• • • •
	45 50.0	86 14.7			
	PORT ISLAND, <sup>1</sup> MICH.		312	D	Gp. 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.
	45 58.3	85 52.6			
	LANSING SHOAL LIGHT STATION, MICH.		296	B	— — — •
	45 54.2	85 33.7			

<sup>1</sup> Marker radiobeacon operates continuously.

<sup>2</sup> Operates 60 seconds, silent 120 seconds, throughout hour with station characteristic code superimposed on continuous carrier.




## DISTANCE FINDING STATIONS

## SYNCHRONIZED RADIOBEACON AND SOUND SIGNALS

STATION, FREQUENCY IN K.C. AND CHARACTERISTIC OF RADIOBEACON SIGNAL	OFF MINUTES OF RADIOBEACON		OPERATING MINUTE OF RADIOBEACON	
	1	2	3	4
LAKE ONTARIO MAIN DUCK, CAN. 306 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	51	53	11.5
OSWEGO	RADIOBEACON	SILENT	54	3
	SOUND SIGNAL	27 3 27 3	56	3
ROCHESTER HBR. 298 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	54	5
BURLINGTON, CAN. 310 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	3
BUFFALO 302 K.C.	RADIOBEACON	SILENT	54	3
	SOUND SIGNAL	18 2 18 2 18 2	18 2 35	3
LONG PT., CAN. 285 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
LAKE ERIE ERIE HBR. PHD. 290 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	18 2 33	5
ASHTABULA 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	56	53	5
CLEVELAND 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	25 2 25 2	53	5
LAKE HURON SOUTHEAST SHL. CAN. 286 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	48 2 2 2 33 33	53	5
TOLEDO HARBOR 292 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
DETROIT RIVER 304 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
LAKE HURON LS. 304 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
HARBOR BEACH 304 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	25 3 25 3	53	5
THUNDER BAY IS. 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	24 2 2 2 24 2 2	53	5
POE REEF 302 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
ROUND IS. PAS. 302 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
LAKE HURON OLD MACKINAC PT. 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	37 3 17 3	53	5

STATION, FREQUENCY IN K.C. AND CHARACTERISTIC OF RADIOBEACON SIGNAL	OFF MINUTES OF RADIOBEACON		OPERATING MINUTE OF RADIOBEACON	
	RADIOBEACON	SOUND SIGNAL	RADIOBEACON	SOUND SIGNAL
DETOUR REEF 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	LAKE 60 RIVER FOG CLEAR 2 2 2	53	5
COVE IS., CANADA 292 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	LAKE 54 RIVER FOGGY 6	53	5
HOPE IS., CANADA 292 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	53	53	5
GROS CAP LS. 308 K.C. CAN.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	50	53	5
WHITEFISH PT. 286 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	25 15 15 25 25 25	53	5
MARQUETTE 302 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	27 3 27 3	53	5
HURON ISLAND 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	40 2 2 20 20	53	5
MANITOU 302 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	24 2 24 2 20 20	53	5
EAGLE HARBOR 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	51 3 3 23	53	5
PASSAGE ISLAND 302 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	26 4 26 4	53	5
ROCK OF AGES 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	28 2 28 2	53	5
LA POINTE 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
DEVILS ISLAND 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	50 2 2 20 20	53	5
DULUTH 308 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	55 3	53	5
TWO HARBORS 308 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 11 27 11	53	5
CARIBOU IS., CAN. 292 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	28 2 28 2	53	5
MICHIGOTEN HBR. 298 K.C. CAN.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	23 2 2 23 2 2	53	5

STATION, FREQUENCY IN K.C. AND CHARACTERISTIC OF RADIOBEACON SIGNAL	OFF MINUTES OF RADIOBEACON		OPERATING MINUTE OF RADIOBEACON	
	RADIOBEACON	SOUND SIGNAL	RADIOBEACON	SOUND SIGNAL
GRAYS REEF 296 K.C.	RADIOBEACON	SILENT	52	6
	SOUND SIGNAL	18 2 18 2 18 2	53	5
NORTH MANITOU SHL. 308 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
PT. BETSIE 290 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	25 15 15 25 25	53	5
LUDINGTON 302 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
MUSKEGON 302 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
CALUMET HBR. 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	23 1 1 23 1 1	53	5
CHICAGO HARBOR 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	26 1 1 26 1 1	53	5
MILWAUKEE BKW. 286 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
MANITOWOC BKW. 302 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	17 1 1 17 1 1	53	5
KEWAUNEE PHD. 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	19 2 19 2 19 2	53	5
STURGEON BAY 290 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	25 2 1 25 2 1	53	5
ST. MARTIN IS. 308 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
GREEN BAY 314 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	18 2 18 2 18 2	53	5
MINNEAPOLIS SHL. 308 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	27 3 27 3	53	5
LANSING SHL. 296 K.C.	RADIOBEACON	SILENT	52	5
	SOUND SIGNAL	19 2 18 2 18 2	53	5

FIGURES INDICATE SECONDS  
DASHES AND BLASTS SHOWN THUS:   
UNMARKED INTERVALS ARE 1 SECOND  
TRANSMISSION RADIOBEACON CHARACTERISTIC SHOWN THUS:   
SYNCHRONIZED SIGNALS 

## ST. LAWRENCE RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CORNWALL TO OGDENSBURG</b>					
1	ST. REGIS ISLAND..... F. W.	On northwest side of island..... C.		30	9
1.5	St. Regis Dike Lighted Buoy 92 Fl. R.	45 01.0	74 39.2		
2	ST. REGIS DIKE RANGE FRONT. Fl. W.	On west end of dike..... C.		18	7
3	ST. REGIS DIKE RANGE REAR Fl. W., 6 sec.	On east end of dike, 500 feet 95½° from front light. C.		30	7
4	St. Regis Dike Lighted Buoy 86 F. Fl. R.	Northwesterly of St. Regis Dike Range Front Light. C.		0	
5	PILON ISLAND..... F. W.	On northwest side of island..... C.		30	9
6	St. Lawrence Park Lighted Buoy 102 F. Fl. R.	45 01.6	74 40.3		
7	DICKINSON LANDING..... F. R.	South side of west entrance to Cornwall Canal. C.		21	3
8	Delaney Shoal Lighted Buoy 6 U. Fl. R.	44 59.5	74 54.5		
9	Archibald Shoal Lighted Buoy 8 U. Fl. R.	Southwest of Dawson Point. C.			
10	Maxwell Shoal Lighted Buoy 11 U. Fl. W.	In 20 feet..... C.			
11	GRAVEYARD POINT..... F. W.	On shore, 4,500 feet below Farran Point. C.		40	13
12	Lighted Buoy 40 U. Fl. R.	44 58.9	74 59.1		
13	Steen Island Lighted Buoy 44 U. Fl. R.	On edge of shoal east of island. C.			
14	Weaver Point Lighted Buoy 60 U. Fl. R.	On south end of shoal off point. C.			
15	Pruuner Shoal Lighted Buoy 64 U. Fl. R.	Southwest of Cooks Point. C.			
16	Goose Neck Island Lighted Buoy 67 U. Fl. W.	On edge of shoal off north- east end of island. C.			
17	Goose Neck Island Lighted Buoy 69 U. Fl. W.	On edge of shoal off north side of island. C.			
18	Jockass Shoal Lighted Buoy 72 U. Fl. R.	In 18 feet, on south side of shoal. C.			

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1	e		Red	Year 1944
1.5			White diamond daymark on pole.	
2	e		Red.	
2			Red box and lantern on white cylindrical tank on concrete base.	1902
3	e	Flash 1 sec.	Red conical cage and lantern on white cylindrical tank on concrete base.	1902
4			Red.	27
5	e		White diamond daymark on pole.	1944
6			Red.	
7		Maintained by Canal Ad- ministration, Department of Transport.	White, square, wood.	1865 1891
8		Marks 14-foot uncharted shoal.	Red.	
9			Red.	
10			Black.	
11			Lantern on pole.	1929
12			Red.	
13			Red.	
14			Red.	
15			Red.	
16			Black.	
17			Black.	
18			Red.	

## ST. LAWRENCE RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
	<b>CORNWALL TO OGDENS- BURG</b>				
19	Doran Point Lighted Buoy 82 U. Fl. R.	Off Point.....	C.	Feet	
20	ROBERTSON POINT..... Fl. R.	On point.....	C.	26	4
21	PINETREE POINT..... Fl. R.	On Point Three Points.....	C.	26	
21.3	Iroquois Point Shoal Lighted Buoy. Fl. W.	In 14 feet, on south side of channel opposite point.	C.		
21.4	Toussaint Island Lighted Buoy. Fl. R.	In 28 feet, on north side of channel south of island.	C.		
21.5	Frazer Shoal Lighted Buoy..... Fl. R.	In 8 feet, off east end of shoal.....	C.		
22	HEAD OF GALOP CANAL..... Fl. R.	On north side of upper en- trance to canal.	C.	28	2
22.5	GALOP CANAL STEERING..... Fl. Amber.	10 feet from shoreline above upper entrance to canal.	C.	26	
23	Float Light 137..... Fl. W.	At upper entrance, Galop Canal.	C.		
24	Lighted Buoy 138..... Qk. Fl. R.	At upper entrance, Galop Canal.	C.		
25	Lighted Buoy 142..... Qk. Fl. R.	West of west entrance to Galop Canal.	C.		
26	Float Light 143..... Fl. W.	On south side of channel.....	C.		
27	NORTH CHANNEL DIKE..... Fl. R.	On angle of dike, northwest side of lower entrance to north channel.	C.	26	4
28	DRUMMOND ISLAND NORTH..... Fl. R.	On revetment wall, north side of channel.	C.	12	4
29	DRUMMOND ISLAND SOUTH..... Fl. W.	On revetment wall, south side of channel.	C.	12	4
30	Float Light..... Fl. W.	In 19 feet.....	C.		
31	NORTH CHANNEL DIKE BEND..... Fl. R.	North side of channel, at bend in dike.	C.	12	4
32	NORTH CHANNEL DIKE WEST END..... Fl. W.	On Spencer Island dike, at entrance to North Channel.	C.	26	12
33	Windmill Point..... Fl. W.	On point, 1.5 miles below Prescott, nearly opposite Ogdonsburg.	C.	02	17
34	Ogdonsburg East Entrance Lighted Buoy 1. Fl. W., 4 sec.	In 25 feet, marks east edge of basin.	C.	10	9
34.5	Ogdonsburg Middle Entrance Lighted Buoy 2. Fl. R., 4 sec.	In 17 feet, on west side of east entrance.	C.	10	

## CANADA AND NEW YORK

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
19			Fast Red.	Year
20			Mast on crib.	1927
21			Mast.	1927
21.3			Black.	
21.4			Red.	
21.5			Red.	
22			Red skeleton tower.	1902 1935
22.5			White diamond slatted day- mark on pole.	1949
23			Black.	
24			Red.	
25			Red.	
26			Black.	
27		Visible around horizon	Red box and lantern on white cylindrical tank on concrete base.	1902 1904
28			Red skeleton tower.	1927 1937
29			Red skeleton tower.	1927 1937
30			Black.	
31			Red skeleton tower.	1927
32		Visible around horizon	Red box and lantern on white cylindrical tank.	1907 24
33			White, circular, stone.	1873 62
34	110 200 mm a	Flash 0.4 sec.	Black.	
34.5	30 200 mm a	Flash 0.4 sec.	Red.	

## ST. LAWRENCE RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CORNWALL TO OGDENSBURG</b>					
35	<i>Ogdensburg West Entrance Lighted Buoy 3.</i> Fl. R., 4 sec.	In 20 feet, on west side of west entrance.		10	7
36	<i>OGDENSBURG CAR FERRY.</i> F. R. U.	On pier, west side of west entrance.		32	6
37	<i>OGDENSBURG.</i> Occ. W., 10 sec. U.	On low, rocky point, west side of west entrance.		63	16
<b>OGDENSBURG TO DE WATTVILLE ISLAND</b>					
38	<i>Ogdensburg Inner Lighted Buoy 6.</i> Fl. W., 4 sec.	In 19 feet, marks turn in Inner Channel.		7	
39	<i>PRESCOTT BEACON.</i> F. R. C.	On east pier, Dominion Light-house Depot. 44 42.4 75 31.0		25	7
39.5	<i>Maitland Traffic Lighted Buoy.</i> Fl. W. C.	Near center of river south-east of Maitland.			
40	<i>North McNair Shoal Lighted Buoy 2 T.</i> Fl. R. C.	On south side of shoal.			
41	<i>McNAIR ISLAND.</i> Fl. W. U.	On old bridge pier on north side of island. 44 35.7 75 30.9		30	12
42	<i>SRELTON ISLAND.</i> Fl. R. U.	On southeast side of island, east end of Brockville Narrows. 44 34.6 75 41.6		31	12
43	<i>Conran Island Shoal Lighted Buoy 3 T.</i> Fl. W. C.	On east end of shoal south of Skolton Island. 44 34.4 75 41.5			
44	<i>ROYAL ISLAND SHOAL.</i> Fl. R. U.	On smallest shoal, immediately west of island.		25	
45	<i>McCoy Island Shoal Lighted Buoy 6 T.</i> Fl. W. C.	At north edge of shoal.			
46	<i>Coronation Shoal Lighted Buoy 6 T.</i> Fl. R. C.	Off south edge of shoal.			
47	<i>NEEDLES EYE ISLAND.</i> Fl. R. U.	On south side of island, 2.5 miles above Brockville. 44 33.4 75 43.3		20	7
48	<i>De Wattville Island Shoal Lighted Buoy 9 T.</i> Fl. W. C.	In 34 feet, on south side of channel.		13	4
49	<i>DE WATTVILLE ISLAND RANGE FRONT.</i> F. W. U.	On island. 44 32.5 75 44.0		30	12
50	<i>DE WATTVILLE ISLAND RANGE REAR.</i> F. W. U.	On mainland, 1,100 feet from front light.		70	17

## NEW YORK AND CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
35	30 200 mm a	Flash 0.4 sec. ....	Feet Red.	Year
36	20 a	Maintained by N. Y. C. R. R. Co.	Black post.	1907
37	3,700 4 e	Light 6 sec., eclipse 4 sec. ....	Square tower, upper half cream colored, lower half gray, dwelling attached. 66 Storm warning signals shown at northeast corner of City Park.	1834 1900
38	30 150 mm a	Flash 0.4 sec. ....	Black.	
39		Visible around horizon. ....	Pole.	1907
39.5	a		Black and white vertical stripes.	
40			Red.	
41			White steel structure.	1932
42		Visible around horizon. ....	Red skeleton tower. 17	1913 1932
43			Black.	
44			Red skeleton tower.	1949
45			Black.	
46			Red.	
47			Red skeleton tower.	1928 1932
48			Black.	
49		Visible on range line only. ....	White square wooden tower.	1927
50		Watch room and lantern of rear light only, visible on range line.	Red skeleton steel tower.	1927



## ST. LAWRENCE RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>DE WATTVILLE ISLAND TO CHIPPEWA POINT</b>					
51	Lighted Buoy 12 T. Fl. R.	On south side of 13-foot patch southeast of Cole Shoal. C.		Red	
52	Lighted Buoy 13 T. Fl. W. (Canadian Channel continued at No. 95.)	In 34 feet. West side of shoal C.			
53	Whaleback Island Lighted Buoy 5. Fl. G., 4 sec.	In 22 feet.		11	8
54	BAY STATE SHOAL. Fl. W., 2.5 sec. U.	In 3 feet, on shoal.		38	11
55	Cross Over Lighted Buoy 9. Fl. W., 4 sec.	In 17 feet.		10	
56	Cross Over Lighted Buoy 4. Fl. R., 4 sec.	In 14 feet, abreast of old lighthouse.		11	7
57	Blind Bay Shoals Lower Lighted Buoy 4 A. Fl. R., 4 sec.	In 20 feet. Marks turn op- posite Blind Bay.		11	7
58	SUPERIOR SHOAL. Fl. W., 4 sec. U.	In 4 feet, at north end of narrow ledge off Chippewa Point.		28	11
<b>CHIPPEWA POINT TO ALEXANDRIA BAY</b>					
59	Haskell Shoal Lighted Buoy 17 T. Fl. W.	In 27 feet. Off north edge of shoal. C.			
60	SISTER ISLANDS. Fl. R., 4 sec. U.	On North Sister Island. 44 24.5 75 50.7		47	10
61	THIRD BROTHER ISLAND SHOAL. U. Fl. W., 4 sec.	In 5 feet, 750 feet northwest of island.		38	11
62	Ironides Shoal Lighted Buoy 18. Fl. R., 4 sec.	In 17 feet, marks turn ¼ mile west of island.		11	7
63	Whiskey Island Shoal Lighted Buoy 12 A. Fl. R., 4 sec.	Marks shoal spot south of Whiskey Island Shoal.		10	7
64	EXCELSIOR SHOALS. Fl. W., 4 sec. U.	In 5 feet, foot of Excelsior Group, about 3 miles below Alexandria Bay.		34	11
65	HARBOR ISLAND. Fl. R., 2 sec. U.	1,650 feet 337° from Sunken Rock Light.		3	
66	SUNKEN ROCK F. G.	On rock, 0.5 mile north of Alexandria Bay.		30	12
67	SUNKEN ROCK SHOAL. Fl. W., 4 sec. U.	In 6 feet, on west edge of reef, southeast of Heart Island.		28	11
68	PULLMAN SHOAL. Fl. R., 4 sec. U.	In 5 feet, on shoal, ½ mile above Alexandria Bay.		34	7

## CANADA AND NEW YORK

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
51			Red.	Yes
52			Black.	
53	20 200 mm a	Flash 0.4 sec.	Black.	
54	200 200 mm e	Flash 0.5 sec.	Red skeleton tower, white tank house, concrete base.	1935
55	140 200 mm a	Flash 0.4 sec.	Black.	
56	30 200 mm a	Flash 0.4 sec.	Red.	
57	30 200 mm a	Flash 0.4 sec.	Red.	
58	200 200 mm e	Flash 0.4 sec.	Black skeleton tower, white tank house, concrete base.	1926
59			Black.	
60	120 6 a	Flash 0.4 sec.	Gray square tower on stone dwelling.	1870
61	200 200 mm e	Flash 0.4 sec.	Black skeleton tower, white tank house, concrete base.	1935
62	30 200 mm a	Flash 0.4 sec.	Red.	
63	30 200 mm a	Flash 0.4 sec.	Red.	
64	200 200 mm e	Flash 0.4 sec.	Black skeleton tower, white tank house, concrete base.	1937
65	7 120 mm e	Maintained by J. M. Breit- schach.	Red iron spindle.	1930
66	1,500 6 e		White conical iron tower.	1848 1882
67	200 200 mm e	Flash 0.4 sec.	Black skeleton tower, white tank house, concrete block.	1923
68	45 200 mm e	Flash 0.4 sec.	Red skeleton tower, white tank house, concrete base.	1937

## ST. LAWRENCE RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ALEXANDRIA BAY TO CLAYTON</b>					
69	COMFORT ISLAND SHOAL..... Fl. W., 4 sec. U.	In 6 feet on head of shoal.....		28	11
70	WELLS ISLAND..... F. R. U.	1,000 feet northeast of Brown Bay.		34	13
71	GRANITE STATE SHOAL..... Fl. W., 2.5 sec. U.	In 6 feet, on east point of shoal, at head of Narrows, off Fineview.		28	11
72	ROCK ISLAND..... F. G.	On northwest point of island, at head of Narrows. 44 18.0 76 01.0		50	14
73	FISHER LANDING..... Fl. G., 4 sec. U.	On rock, 2,400 feet 140° from Granite State Shoal Light.		11	---
74	Masons Point Lighted Buoy 25. Fl. W., 4 sec. U.	In 33 feet. Off shoal off Masons Point.		11	9
75	CHAPMAN SHOAL..... Fl. W., 2.5 sec. U.	In 2 feet, on southeast point of shoal, marks turn.		28	11
76	WASHINGTON ISLAND PIER... F. G. U.	In 18 feet, off end of concrete pier.		15	7
77	Clayton Shoal Lighted Buoy 1. Fl. W., 2 sec. U.	In 8 feet, on edge of shoal, ¼ mile west of Washington Island.		5	---
<b>WOLFE ISLAND CUT</b>					
78	Wolfe Island Cut Lighted Buoy 38 T. Fl. R. U.	At southeast end of cut, Blanket Shoals. C.		---	---
79	Wolfe Island Cut North Lighted Buoy 40 T. Fl. R. U.	On east side of north entrance to Wolfe Island Cut. C.		---	---
80	WOLFE ISLAND..... F. W. U.	On Quebec or East Point... 44 14.3 76 11.2		37	12
<b>CLAYTON TO TIBBETTS POINT</b>					
81	Calumet Shoal Lighted Buoy 20. Fl. R., 4 sec. U.	In 25 feet, 3,000 feet 45° from Bartlett Point Light, N. Y.		11	7
82	BARTLETT POINT..... F. G. U.	In 3 feet, off Prospect Park... 44 14.4 76 08.5		35	13
83	LINDA ISLAND..... Fl. W., R. sector, 4 sec. U.	Off north end of island... 44 12.3 76 12.4		33	10 7
84	BANFORD POINT..... Fl. R. U.	On south side of Wolfe Island... 44 12.4 76 14.3		15	---
85	IRVINE POINT RANGE FRONT... F. W. U.	On point, south side of Wolfe Island. C.		28	8
86	IRVINE POINT RANGE REAR... F. W. U.	1,651 feet 14° from front light. C.		60	8

## NEW YORK AND CANADA

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
69	200 200 mm e	Flash 0.4 sec. ....	Black skeleton tower, white tank house, concrete base.	1924
70	800 300 mm e	-----	Red, skeleton tower, white tank house, concrete base.	1912
71	200 200 mm e	Flash 0.5 sec. ....	Red skeleton tower, white tank house, concrete base.	1923
72	1,000 6 e	-----	White conical tower. 51	1848 1911
73	10 150 mm a	Flash 0.4 sec. ....	Telephone at this station. On white post.	1934
74	110 200 mm a	Flash 0.4 sec. ....	Black.	
75	200 200 mm e	Flash 0.5 sec. ....	Red skeleton tower, white tank house, concrete base.	1924 1942
76	40 Fl e	Maintained by Sacony-Vacuum Oil Co.	Black post on concrete crib.	1926
77	25 120 mm e	Maintained by Consaul-Hall Co.	Black.	
78	-----	-----	Red.	
79	-----	-----	Red.	
80	-----	-----	White, square, wood; red lantern roof. 33	1861 1912
81	30 200 mm a	Flash 0.4 sec. ....	Red.	
82	700 300 mm e	-----	Black skeleton tower, white tank house, concrete base.	1926
83	W. 170 R. 45 300 mm a	Flash 0.4 sec. Red from 66° to 70°, covers rocky patch about 1 mile distant.	White skeleton tower, with inclosed base.	1915
84	-----	-----	Red steel superstructure.	1944
85	-----	-----	White diamond daymark on pole, shed at base.	1924
86	-----	-----	White diamond daymark on pole, shed at base.	1924

## ST. LAWRENCE RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
	<b>CLAYTON TO TIBBETTS POINT</b>			<i>Fath</i>	
87	<i>Bayfield Island Lighted Buoy</i> 44 T. Fl. R.	On the alignment of Irvine Point Range Lights, 2,760 feet from front light. C.			
88	CARLETON ISLAND..... Fl. W., 4 sec. U.	On west point of island.....		107	10
89	<i>Hinckley Point Lighted Buoy</i> 88. Fl. R., 4 sec.	In 24 feet, opposite south- west point of Carleton Is- land.		11	7
90	<i>Feather Bed Shoal Lighted Buoy 89.</i> Fl. W., 4 sec.	In 21 feet, off west edge of shoal.		10	9
91	CAPE VINCENT BREAKWATER EAST END. F. R., dark sector.	On breakwater.....		28	12
92	CAPE VINCENT BREAKWATER WEST END. F. R., dark sector.	On breakwater.....		28	12
93	WOLFE ISLAND SOUTH SIDE... Fl. W. U.	On south side of island...C. 44 07.6 78 23.2		45	
94	Tibbetts Point..... Occ. W., 10 sec. Marker Radiobeacon.	On point, south side of head of St. Lawrence River. 44 08.0 78 22.2		69	16
94.5	<i>Tibbetts Point Lighted Buoy 51.</i> Fl. W., 4 sec.	In 30 feet, 5,000 feet 243° from Tibbetts Point Light.		10	
	<b>CANADIAN CHANNEL</b> (Continued from No. 52)				
	<b>BRIDGE ISLAND TO GANA- NOQUE NARROWS</b>				
95	BRIDGE ISLAND..... Fl. W. U.	On Island No. 116 A, south of Bridge Island. C. 44 28.0 75 50.1		18	
95.5	<i>Ice Island Float Light</i> ..... Fl. W. C.	In 33 feet, 2,400 feet 255° from island. C.			
96	<i>Poole's Resort Float Light</i> 9C. Fl. W. C.	On south side of channel op- posite Poole's Resort. C.			
97	DUCK ROCK..... Fl. W. U.	On island No. 106 G, west of Duck Island. C.		22	
98	GRENADIER ISLAND..... Fl. W. U.	On southwest point of island, 2¼ miles below Rockport. C.		25	6
99	WOOD ISLAND..... Fl. R. U.	On south side of island...C. 44 21.5 75 59.7		20	6
100	LYNEDOCH ISLAND..... Fl. G. U.	On northwest point of small island, south of Lynedoch Island. C.		40	7

## CANADA AND NEW YORK

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
87			Red.	Year
88	170 300 mm a	Flash 0.4 sec. Obscured from 230° to 0°.	White skeleton tower with white tankhouse. 88	with 1899 1914
89	30 200 mm a	Flash 0.4 sec.....	Red.	
90	110 200 mm a	Flash 0.4 sec.....	Black.	
91	1,200 5 e	Illuminates 307° of the hori- zon; dark sectors lying toward shore.	White square inclosed struc- ture. 28	1901 1912
92	1,200 5 e	Illuminates 307° of the hori- zon; dark sectors lying toward shore.	White square inclosed struc- ture. 28	1901 1904
93			Telephone and radiotele- phone at this station. Pole.	1943
94	6,000 4 e	Light 6 sec., eclipse 4 sec... DIAPHONE, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 286 kc, groups of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at fog signal tower.	White conical tower. 59	1827 1882
94.5	140 200 mm e	Flash 0.4 sec.....	Black.	
95		Visible around horizon.....	White skeleton tower, con- crete base. 13	1910 1943
95.5			Black.	
96			Black superstructure.	
97		Visible around horizon.....	White skeleton tower, con- crete base. 13	1913 1943
98	e		Lantern on tank.	1856 1946
99			Red square skeleton super- structure. 26	1943
100	e		White, square, wood. 26	1856 1948

## ST. LAWRENCE RIVER

No	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CANADIAN CHANNEL</b>					
<b>GANANOQUE NARROWS TO KINGSTON</b>					
101	GANANOQUE NARROWS..... F. W. U.	On northeast end of Prince Rogent Island. C.		44	
102	JACKSTRAW SHOAL..... Fl. R. U.	On north side of channel, 2½ miles below Gananoque. C.		34	6
103	SPECTACLE SHOAL..... Fl. W. U.	On protection pier, 1,500 feet west of Gananoque. C.		28	3
104	RED HORSE ROCK..... Fl. W. U.	On southwest end of Beau- vage Island. C.		28	6
105	BURNT ISLAND..... Fl. W. U.	On southeast part of island, 3,000 feet above Red Horse Rock. C.		49	8
106	Juniper Island Float Light... Fl. W. U.	On east side of channel west- ward of Juniper Island. C.			
107	Cold Bath Shoal Lighted Buoy 48 T. Fl. W. U.	In 14 feet, at east end of shoal off Oak Point. C.			
108	KNAPP POINT..... Fl. W. U.	On point, north side of Wolfe Island. C.		28	12
108.5	Marysville, Wolfe Island Light Boat. Fl. R. U.	Marks west side of entrance to channel leading to ferry wharf at Marysville. C.		44 18.9	76 24.0
109	CEDAR ISLAND..... Fl. R. U.	Southwest extremity of Cedar Island. C.		25	10
110	BARRIEFIELD COMMON RANGE FRONT. F. G. U.	370 feet east from end of bridge to Kingston. C.		48	14
111	BARRIEFIELD COMMON RANGE REAR. F. G. U.	1,500 feet 37° from front light. C.		76	14
<b>KINGSTON TO LAKE ONTARIO</b>					
111.5	Kingston Harbor Inner In- take Lighted Buoy. Fl. R. U.	In 60 feet, 1,338 feet 178° from southwest corner of Kingston Shipbuilding & Drydock Co. wharf. C.			
112	Intake Pipe Lighted Buoy... Fl. R. U.	At outer end of intake pipe off southwest corner of old Frontonac Coal and Wood Company's wharf. C.			
113	Penitentiary Shoal Lighted Buoy 61 T. Fl. W. U.	North of shoal, 1¼ miles southwest of Kingston. C.			
114	Little Cataragui Bay Lighted Buoy. Fl. G. U.	Off end of west breakwater. C.			
115	PORTSMOUTH RANGE FRONT... F. G. U.	On east end of Carruthers Point, west side of Little Cataragui Bay. C.		32	13
116	PORTSMOUTH RANGE REAR... F. G. U.	On north shore of bay, 3,500 feet 13½° from front light. C.		101	18

## CANADA

No.	Candlepower Apparatus Mnemonic	Light characteristic Fog signal	Structure vessel or buoy	
			Top of lantern above ground	Established Rebuilt
101			Feet White, square, wood. 37	Year 1858 1937
102		Visible around horizon	White, square, wood; on pier. 29	1858 1946
103			Red skeleton tower.	1856 1936
104			White, square, wood; on pier. 28	1856
105			White wooden tower with daymark.	1856 1945
106			Black.	
107			Red.	
108			White, square, wood. 20	1874 1939
108.5			Red.	
109			Red skeleton steel tower.	1942
110		Radio station on Barriefield Common; call VBH. Storm signal mast at city pumping station.	White oval daymark on red tripod, brown shed along- side. 50	1862 1921
111			White oval daymark on red tripod, brown shed along- side. 80	1892 1921
111.5			Red.	
112			Red.	
113			Red and black horizontal bands.	
114			Black.	
115		Visible on range line and in channel toward Kingston.	White, square, wood. 33	1912 1937
116		Visible on range line	White square skeleton tower. 64	1912 1938

## ST. LAWRENCE RIVER AND LAKE ONTARIO

No.	Name Character and period of light	Location Latitude, N. Longitude, W.	Light above low water	Miles seen
<b>CANADIAN CHANNEL</b>				
<b>KINGSTON TO LAKE ONTARIO</b>				
117	<i>Carruthers Point Lighted Buoy.</i> Fl. R.	In 85 feet, marks extremity of intake pipe off point. C.	-----	-----
117.5	<i>Snake Island Lighted Buoy.</i> Fl. W.	Marks north edge of shoal north of island. C.	-----	-----
118	<i>Middle Ground Lighted Bell Buoy 89 T.</i> Fl. W.	On west end of shoal, between Snake Island and Seven Acre Shoal. C.	-----	-----
<b>LAKE ONTARIO, EAST END</b>				
119	<i>Allan Otty Shoal Lighted Buoy 2.</i> Fl. R., 4 sec.	In 30 feet, south side of shoal.	10	7
120	<i>EAST CHARITY SHOAL.</i> Fl. W., 4 sec. U.	In 14 feet, on southeast side of Charity Shoals Group. 44 02.2 76 28.8	52	15
121	<i>East Charity Shoal Bell Buoy 4.</i>	In 24 feet, on east side of shoal.	-----	-----
122	<i>Stony Island Lighted Buoy 2.</i> Fl. W., 4 sec.	In 33 feet, off northeast end of island.	10	9
122.5	<i>Point Peninsula Lighted Buoy 3.</i> Fl. W., 10 sec.	In 26 feet, off southern end of peninsula, 6 3/4 miles 273 1/2 from Sackets Harbor Light.	11	-----
123	<i>CHERRY ISLAND.</i> Fl. W., 4 sec. U.	On southwest point of island, Chaumont Bay.	32	10
124	<i>CHAUMONT HARBOR.</i> P. G. U.	On Independence Point, Chaumont Bay.	30	12
125	<i>SACKETS HARBOR.</i> Fl. W., 2.5 sec. U.	On north side of Horse Island.	57	14
126	<i>Lime Barrel Shoal Lighted Buoy 1.</i> Fl. W., 4 sec.	In 30 feet, 3 1/2 miles 231° from Sackets Harbor Light-house.	11	9
126.5	<i>ASSOCIATION ISLAND.</i> F. R. U.	On west side of Henderson Bay. 48 53.5 76 13.0	27	-----
126.7	<i>HENDERSON HARBOR.</i> F. R. U.	48 51.8 76 12.2	17	-----
127	<i>Galloo Island Shoal Lighted Buoy 5.</i> Fl. W., 4 sec.	In 30 feet, off southwest end of shoal.	10	9
128	<i>Galloo Island.</i> Gp. Fl. W., 12 sec. 3 flashes.	On southwest end of island. 43 53.3 76 26.7	58	15
129	<i>Stony Point.</i> Fl. R. 10 sec. U.	On point.	57	15
<b>SOUTH SIDE</b>				
130	<i>Oswego Outer Harbor Lighted Buoy 1.</i> Fl. G., 4 sec.	In 30 feet on east side of harbor entrance.	11	6

## CANADA AND NEW YORK

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy Top of lantern above ground	Established Rebuilt
117	-----	Privately maintained.	Red.	Year
117.5	-----	-----	Black.	-----
118	-----	BELL, on buoy.	Black.	-----
119	30 200 mm a	Flash 0.4 sec.	Rod.	-----
120	1,300 4 a	Flash 0.4 sec.	White octagonal pyramidal tower on square concrete crib.	1935
121	-----	BELL, on buoy.	Red.	-----
122	110 200 mm a	Flash 0.4 sec.	Red.	-----
122.5	130 200 mm a	Flash 1 sec.	Black.	-----
123	170 300 mm a	Flash 0.4 sec. Maintained until Nov. 25 each year.	White skeleton tower with inclosed base.	1911
124	400 300 mm e	-----	White skeleton tower.	1911
125	500 5 a	Flash 0.5 sec.	White square tower attached to dwelling.	1831 54 1899
126	110 200 mm a	Flash 0.4 sec.	Black.	-----
126.5	100 e	Maintained from June 15 to Sept. 15 by General Electric Realty Corp., Schenectady, N. Y.	-----	1946
126.7	100 a	-----	-----	-----
127	110 200 mm a	Flash 0.4 sec.	Black.	-----
128	7,000 4 e	3 flashes 2 sec. each, 2 eclipses 1 sec. each, 1 eclipse 4 sec. DIAPHONE, air; group of 3 blasts every 30 sec.; 3 blasts 1 sec. each, 2 silences 1 sec. each, 1 silence 25 sec.	Gray conical tower, covered way to dwelling.	1820 60 1867
129	3,000 500 mm e	Flash 2 sec., eclipse 8 sec.	Telephone at this station, via Coast Guard Station.	-----
129	-----	-----	White square tower, dwelling attached.	1838 59 1870
130	20 200 mm a	Flash 0.4 sec.	Black.	-----

## LAKE ONTARIO

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
131	Oswego Elevator..... Op. Fl. W., 12 sec. 2 flashes.	On northeast corner of elevator roof.		Feet 146	19
132	OSWEGO EAST BREAKWATER. Fl. G., 4 sec.	On end of breakwater.....		43	7
133	OSWEGO WEST PIERHEAD.... Occ. R., 5 sec. Radiobeacon. Distance-Finding Station.	On end of pierhead..... 43 28.4                      76 31.0		57	15
134	Oswego Inner Lighted Buoy 2.. Fl. R., 4 sec.	In 20 feet, at junction of Oswego River and outer harbor.		11	-----
135	Canal Channel Lighted Buoy 4. F. W.	In 18 feet, at channel leading to Lock No. 8.		4	-----
136	Canal Channel Lighted Buoy 8. F. W.	In 18 feet at channel leading to Lock No. 8.		4	-----
137	Oswego West Harbor Lighted Buoy 2. Fl. R., 4 sec.	In 21 feet, on north side of channel at entrance.		7	-----
138	Oswego West Harbor Lighted Buoy 1. Fl. W., 4 sec.	In 21 feet, on south side of channel.		7	-----
139	Oswego West Harbor Lighted Buoy 4. Fl. R., 4 sec.	In 15 feet, on north side of channel.		7	-----
140	Oswego West Harbor Lighted Buoy 8. Fl. R., 4 sec.	In 21 feet, on north side of channel.		7	-----
141	Ford Shoal Lighted Buoy 7.... Fl. W., 4 sec.	In 30 feet.....		10	-----
142	Fair Haven Outer..... Fl. W., 4 sec.	Near outer end on west pier, entrance to Little Sodus Bay. 43 21.0                      76 42.5		31	11
143	Sodus Outer..... Op. Fl. W., 10 sec. 2 flashes. Marker Radiobeacon.	On north end of west pier, entrance to Great Sodus Bay. 43 16.0                      76 58.5		51	14
144	SODUS ENTRANCE RANGE FRONT. F. G.	In 10 feet, north of Sand Point. 43 16.2                      76 58.4		18	11
145	SODUS ENTRANCE RANGE REAR. F. G.	In 3 feet, 800 feet 182° from front light.		32	13

## NEW YORK

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
131	2,000 300 mm e	Flash 3 sec., eclipse 1 sec., flash 3 sec., eclipse 5 sec.	Feet	Year 1931
132	80 300 mm a	Flash 0.4 sec.....	White skeleton tower with inclosed base.	1932
138	5,000 4 e	Light 3 sec., eclipse 2 sec. --- HORN, diaphragm, air; blast 8 sec., silent 27 sec.	White square tower on corner of square building.	1931 1934
			Telephone at this station. Radiotelephone via Coast Guard Station.	
			<b>DISTANCE-FINDING STATION.</b> For method of operation, see p. 11.	
			Storm warning signals shown on fort bank at Fort Ontario.	
134	30 200 mm a	Flash 0.4 sec.....	Red.	
135	50 Hl o	Maintained by State of New York.	Hand lantern on red can buoy.	
136	50 Hl o	Maintained by State of New York.	Hand lantern on red can buoy.	
137	7 150 mm a	Flash 0.4 sec.....	Red.	
138	30 150 mm a	Flash 0.4 sec.....	Black.	
139	7 150 mm a	Flash, 0.4 sec.....	Red.	
140	7 150 mm a	Flash 0.4 sec.....	Red.	
141	140 200 mm e	Flash 0.4 sec.....	Black.	
142	200 200 mm c	Flash 0.4 sec.....	White daymark on red skeleton tower.	1872 1940
143	8,000 4 e	Flash 1.5 sec., eclipse 2 sec. flash 1.5 sec., eclipse 5 sec. HORN, diaphragm, air; group of 2 blasts every 30 seconds, blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec. RADIOBEACON: Transmits on 290 kc, a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	Square white pyramidal tower.	1858 1938
			Telephone at this station. Storm warning signals shown on the Pennsylvania R. R. grounds.	
144	1,000 Rg e	-----	White circular daymark on white column.	1940
145	1,000 Rg e	-----	White diamond daymark on white column.	1940

## LAKE ONTARIO

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
161	PORT WELLS OUTER..... Fl. R., 5 sec.	On outer end of west embankment at entrance to canal. C.		45	12
162	PORT WELLS ENTRANCE EAST. Fl. G. U.	43 14.7	70 13.1	30	12
163	PORT WELLS MAIN..... Fl. W., 5 sec. Radiobeacon.	On west breakwater.....C. 43 14.2 79 13.1		05	17
164	Port Dalhousie Main..... F. R.	On shore east of line of east breakwater, entrance to old Welland Canal. C.		56	15
165	PORT DALROUSIE RANGE FRONT. F. R. (North side, see No. 202)	Near outer end of east pier, 1,500 feet 357° from main light. C.		42	9
<b>BAY OF QUINTE</b>					
166	CENTRE BROTHER ISLAND..... Fl. W. U.	On north point of island...C. 44 12.4 76 37.8		31	12
167	Upper Gap Lighted Buoy..... Fl. W.	Off east end of shoal, 4,300 feet 56° from Point Pleasant Light. C.			
168	Point Pleasant..... F. G.	Entrance to Bay of Quinte, C. 44 06.6 76 50.6		52	14
169	ALLISON WHARF..... Fl. W. U.	North shore of Adolphus Reach. C.		22	10
169.5	GLENORA WHARF..... F. G. U.	On outer end of east pier of wharf. C. 44 02.5 77 03.6			
170	Pictou Outer Entrance Lighted Buoy. Fl. W.	On east side of channel...C.			
171	Pictou Inner Entrance Lighted Buoy. Fl. R.	On west side of channel...C.			
172	Forsters Island Lighted Buoy S. T. Fl. W.	1,200 feet 07° from north point of island. C.			
173	MORAWK CHURCH..... F. R. U.	2 miles west of Deseronto...C.		50	
174	Telegraph Narrows East Entrance Lighted Buoy. Fl. R.	2,975 feet 72° from Telegraph Island Light. C.			
175	Telegraph Island Lighted Buoy. Fl. R.	525 feet 27° from Telegraph Island Light. C.			
176	TELEGRAPH ISLAND..... Fl. W. U.	On north side of island, Bay of Quinte. C. 44 09.8 77 07.3		46	9

## CANADA

No.	Candlepower Apparatus luminaut	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
161		HORN; groups of 2 blasts every 60 sec.; blast 3 sec., silent 9 sec.; blast 3 sec., silent 45 sec.	Flt Pole.	Year 1921 1942
162			Pole.	1936
163		RADIOBEACON: Transmits on 310 kc, groups of 3 dots and 1 dash (••• —) followed by 1 long dash.	White skeleton tower. Red daymarks on north and east sides of lighthouse tower. 1931 1944	
164			White, octagonal, wood; red iron lantern. 58	1852 1943
165		TYFOM, air; blast 4 sec., silent 26 sec. Horn points north.	White, square, wood. 38	1870 1939
166			White, square, wood; red lantern. 31	1890 1928
167			Black.	
168			White, octagonal wood; red lantern. 52	1866 1943
169			Lantern on pole.	
169.5			Lantern on pole.	1948
170			Black.	
171			Red.	
172			Black.	
173				
174			Red.	
175			Red.	
176			White square tower on dwelling on cribwork. 41	1870 1926

## LAKE ONTARIO

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>BAY OF QUINTE</b>					
177	Telegraph Narrows West Entrance Lighted Buoy. Fl. G.	1,150 feet	258° from Telegraph Island Light. C.	Fast	
178	Northport Shoal Lighted Buoy 103 T. Fl. W.	In 16 feet, on north side of shoal.	C.		
178.5	Trident Point Lighted Buoy... Fl. W.	In 17 feet, southwesterly of point.	C.		
179	Minnie Blakely Shoal Lighted Buoy 108 T. Fl. R.	In 20 feet.....	C.		
180	Massasauga Point Lighted Buoy Fl. G.	Off Rush Bar.....	C.		
181	BELLEVILLE..... F. R.	On warehouse roof at entrance to harbor. 44 09.2	77 22.7 C.	38	8
182	BAY OF QUINTE BRIDGE..... 2 F. W. 2 F. R. 2 F. G.	West of Belleville.....	C.	18	3
183	NIGGER ISLAND SHOAL..... Fl. W.	In 11 feet, on north side of steamboat channel.	C.	27	12
184	Nigger Narrows Lighted Buoy. Fl. G.	1,800 feet	228° from Nigger Island Shoal Light. C.		
185	Onderdonk Point Lighted Buoy. Fl. R.		C.		
186	TRENTON RANGE FRONT..... F. R.	On west side of harbor....	C.	20	2
187	TRENTON RANGE REAR..... F. R.	520 feet	280½° from front light. C.	42	2
188	Trenton Entrance Lighted Buoy. Fl. W.	1,375 feet	203° from observation spot on Baker Island. C.		
189	Trenton Lighted Buoy 110 T... Fl. R.	At turn in east dredged channel. 44 05.6	77 32.8 C.		
190	Trenton Lighted Buoy 112 T... Fl. R.	North side of turn in channel 4,500 feet	99° from Trenton Range Front Light. C.		
<b>MURRAY CANAL</b>					
191	F. W.....	20 feet from end of north pier, east entrance to canal.	C.	27	6
192	F. W. or F. R.....	Above center of swing pier of Carrying Place Highway Bridge.	C.	35	7

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
177			Fast Black.	1881
178			Black.	
178.5			Black.	
179			Red.	
180			Black.	
181			Red square wooden tower. 86	1881 1941
182		Red light at each end of draw when closed; open draw indicated by 2 green lights, flanked by 2 white lights; vessels must pass between green and white lights. Maintained by Bridge Co.	Open-truss bridge.	1891
183			Pole on pier.	1894 1927
184			Black.	
185			Red.	
186			White diamond daymark on mast, shed at base.	1905 20
187			White diamond daymark on mast, shed at base.	1905 20
188			Black.	
189			Red.	
190			Red.	
191			White cylindrical column, hexagonal base.	1891 18
192		Centers of swings or lights (white if open, red if closed) in range, indicate middle of channel and canal. Pass to southward of swing.	Open-truss bridge.	1891



## LAKE ONTARIO

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>MURRAY CANAL</b>					
103	F. W. or F. R.	Above center of swing pier of Central Ontario Railway Bridge.		20	5
104	F. W. or F. R.	Above center pier of Smithfield Bridge.		35	7
195	F. W. or F. R.	Above center of swing pier of Lovatt Bridge.		35	6
106	F. W.	30 feet from end of north pier, west entrance to canal.		27	6
107	BRIGHTON RANGE 3. F. W.	In 15 feet, north side of channel, and on axis of Murray Canal.		20	3
108	BRIGHTON RANGE 2. Fl. W.	1,440 feet 80° from outer end of Brighton Wharf.		16	7
109	BRIGHTON RANGE 1. F. R.	2,600 feet 294° from Range 2.		35	7
200	Presqu'île Middle Ground Lighted Buoy 121 T. Fl. W.	On southwest end of shoal, 2,280 feet 350° from Presqu'île Lighthouse.			
201	Presqu'île. F. W.	On east point of peninsula.		67	15
<b>NORTH SIDE</b>					
202	Pigeon Island. Gp. Fl. W., 5 sec. 2 flashes.	On island, 4 miles from Wolfe Island, northeast end of lake.		65	15
203	Ninemile Point. Gp. Fl. W., 25 sec. 3 flashes.	On southwest point of Simcoe Island.		45	14
204	Main Duck Island. Fl. W., 6 sec. Radiobeacon. Distance-Finding Station.	On west end of island.		74	16
205	Psyche Shoal Lighted Bell Buoy 72 T. Fl. R.	In 39 feet, on southeast side of shoal.			
206	False Ducks. F. W.	On east point of Sweetman Island.		68	15
207	PRINCE EDWARD POINT. Fl. G.	On point.		36	8

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
193			Feet	Year
			Open-truss bridge.	1891
104			Open-truss bridge.	1891
195		Centers of swings or lights (white if open, red if closed) in range, indicate middle of channel and canal. Pass to southward of swing.	Open-truss bridge.	1891
196			White cylindrical column, hexagonal base.	1891 1899
197		No. 3 light, in range with No. 2, leads up from canal through center of channel.	White, square, wood; on octagonal pier.	1891
198			Mast.	1891 1948
199			White pole.	1891
200			Black.	1933
201			White octagonal, stone.	1840
202		Flash 0.2 sec., eclipse 0.8 sec., flash 0.2 sec., eclipse 3.8 sec. HORN, hand, answers signals.	White square skeleton tower inclosing stair cylinder; red cylindrical lantern; white rectangular wooden dwelling.	1871 1909
203	20,000	Flash, 4 sec. eclipse; flash, 4 sec. eclipse; flash, 17 sec. eclipse. DIAPHONE, air; blast 3 sec., silent 27 sec.	White, circular, stone; red lantern.	1833
204		DIAPHONE, air; group of 2 blasts every 60 sec.; blast 3 sec., silent 3 sec., blast 3 sec., silent 51 sec. Horn points 250°. RADIOBEACON: Transmits on 306 kc. groups of dash, dot, 2 dashes (— • — —) followed by 3 long dashes.	White octagonal tower, red lantern roof.	1915
205		BELL, on buoy.	DISTANCE-FINDING STATION. For method of operation, see p. 11.	
206		DIAPHONE, air; blast 4 sec., silent 50 sec. Horn points south.	Red.	
207			White circular, stone; red lantern; white rectangular fog-signal house with red roof.	1828 62
			White, square, wood; dwelling attached.	1851 1941

## LAKE ONTARIO

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH SIDE</b>					
208	Point Peter..... Fl. W., 20 sec.	On point..... 43 50.3	C. 77 09.8	62	15
208.5	Point Peter Lighted Gong Buoy. Fl. E.	Marks outer limit of danger area.	C.		
209	SCOTCH BONNET..... Fl. W. U.	On small island, 1 mile south- west of Nicholson Island. C.		51	
	(For Murray Canal going east read upward from No. 201.)	48 54.0	77 32.5		
211	COBOURO EAST PIERHEAD..... Fl. E. U.	On outer end of east pier... 48 57.2	C. 78 09.9	45	9
212	COBOURO WEST PIERHEAD..... Fl. W. U.	On outer end west pier... 43 57.2	C. 78 10.2	32	7
213	COBOURG RANGE FRONT..... F. R.	On east pier, 165 feet inside customs warehouse.	C.	30	3
214	COBOURG RANGE REAR..... F. R.	East of east pier, 375 feet 8¼° from front light.	C.	38	3
215	Peter Rock..... Fl. W. U.	On rock, 2.7 miles east of Port Hope Breakwater. 43 56.4	C. 78 13.8	45	12
216	PORT HOPE..... Fl. G.	Near outer end of east break- water.	C.	25	4
217	OSHAWA HARBOR..... Fl. E. U.	On outer end of west pier... C.			
218	OSHAWA HARBOR RANGE FRONT..... F. R. U.	On west pier..... C.		21	
219	OSHAWA HARBOR RANGE REAR..... F. R. U.	452 feet 328° from front light. C.		30	
220	WHITBY..... Fl. W.	On west pier..... 43 51.0	C. 78 55.7	37	13
<b>TORONTO HARBOR</b>					
221	East Entrance Range Front..... Fl. W., 12 sec.	On east pier 25 feet from outer end. 43 37.9	C. 79 20.8	43	9
222	EAST ENTRANCE RANGE REAR..... F. R.	1,650 feet 323° from front light.	C.	69	10

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
208	40,000	DIAPHONE, air; blast 3 sec., silent 27 sec.	Fl. W. Year White, circular, stone; white wooden fog-signal house, brown roof. 1833 60 1925	
208.5		GONG, on buoy.....	Red.	
209			White, circular, stone; dwell- ing attached. 1856 54 1943	
211		Flash 0.8 sec. DIAPHONE, air; groups of 2 blasts every 60 sec.; blast 4 sec., silent 4 sec., blast 4 sec., silent 48 sec.	Concrete pyramid. 1915 1924	
212			Lantern on mast with small shed at base. 1883 1945	
213			Black drum on mast in front of white diamond daymark. 26 1907	
214			Black drum on mast in front of white diamond daymark. 34 1907	
215	e		White, circular, stone; sur- rounded by cribwork pier. 48 1840 1946	
216	a		White pole. 1868 1938 1946	
218		HORN, hand, answers signals.	Lights on pole. 1930 1937	
219			Lights on pole. 1930 1937	
220			White, octagonal, wood; red roof. 1844 39 1923	
221		Flash 1 sec. Visible from 197° to 17°. BELL; 1 stroke every 3 sec.	Red skeleton tower, white inclosed upper part; red lantern roof. 1895 40 1926	
222		DIAPHONE, air; blast 4 sec., silent 56 sec. Horn points southeast.	Box attached to electric transmission tower; fog- signal house, white square, wood, green roof, 545 yards shoreward of front light- house. 1916	
		Lifeboat station at west pier, opposite fog signal.	Storm signal on transmission tower below the rear light.	

## LAKE ONTARIO AND LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>TORONTO HARBOR</b>					
223	EAST ENTRANCE INNER..... F. G.	On inner end of east pier, 2,400 feet 320° from front light. C.		Feet 27	2
224	Gibraltar Point..... F. G. Radiobeacon.	1.5 miles south of Toronto...C. 43 36.8                      79 23.2		66	16
225	West Entrance Lighted Bell Buoy 140 T. Qk. Fl. G.	5,700 feet, 285½° from front light. C.			
226	West Entrance Lighted Buoy... Fl. W.	In 21 feet.....C.			
227	WEST ENTRANCE RANGE FRONT. Fl. G. Fl. G.	On south pier, near outer end. C. 43 37.8                      79 24.2		43	8
228	WEST ENTRANCE RANGE REAR. Fl. G.	On south pier, near inner end, 2,423 feet 54° from front light. C.		66	10
<b>LAKE ONTARIO WEST END</b>					
229	OAKVILLE..... F. G.	On east pier, 45 feet from outer end. C. 43 26.4                      79 30.0		30	13
230	BRONTE..... F. W.	On north pier, near outer end. C. 42 23.0                      79 42.4		27	12
230.5	Burlington Canal Approach Lighted Bell Buoy. Fl. W.	4,500 feet 53° from Burling- ton Bay Light. C.			
231	BURLINGTON BAY..... 2 F. G. Radiobeacon. Distance-Finding Station.	On outer end of south pier... C. 43 18.1                      79 47.4		40	13
232	Burlington Bay (MAIN)..... F. G.	Near middle of south pier... C. 43 17.9                      79 47.7		75	17

## CANADA AND NEW YORK

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
223		Not visible lakeward; guide to obannel from harbor side only. BELL; 1 stroke every 5 sec. Radio station; call VBC... RADIOBEACON: Transmits on 310 kc, groups of dash dot dash (--- • ---) followed by 3 long dashes.	Feet White, square, wood; fog- bell platform on north side. 22	Year 1898 1940
224			White, hexagonal, stone. 63	1808
225		BELL, on buoy.....	Red.	
226			Black.	
227		Upper lights visible on range line only, lower lights visi- ble from all points of ap- proach. DIAPHONE, air; group of 2 blasts every 60 sec., blast 2 sec., silent 2 sec., blast 2 sec., silent 54 sec. Bell; 1 stroke every 5 sec. if dia- phone disabled.	White, square; surmounted by pole supporting lantern. 26	1856 1925
228			Red skeleton tower, inclosed upper part, surmounted by pole supporting lantern. 46	1838 1935
			Storm-signal on southeast side of tower.	
229			White, hexagonal, wood; red lantern. 31	1863 1888
			Storm-signal mast on shore above east pier.	
230			White, square, wood. 27	1906
230.5		BELL, on buoy..... Radar reflector.	Black and white vertical stripes.	
231		HORN, diaphragm; electric; blast 2 sec., silent 15 sec. RADIOBEACON: Transmits on 310 kc, groups of 1 dot, 1 dash and 1 dot (• --- •) followed by 2 long dashes.	White square tower, red lan- tern. DISTANCE-FINDING STA- TION. For method of oper- ation, see p. 11.	1939
232			Gray, circular, stone, red lantern. 75	1838
			Storm-signal mast shown at main light.	

## LAKE ONTARIO AND LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE ONTARIO WEST END</b>					
233	BURLINGTON BAY INNER... F. R.	On inner end of south pier... C.		Fath 20	5
<b>LAKE ERIE BUFFALO HARBOR NORTH ENTRANCE</b>					
234	BUFFALO INTAKE CRIB... Sp. Fl. R., 5 sec. U. 2 flashes.	In 17 feet, on north side of north entrance to harbor.		60	13
234.5	Buffalo North Entrance Lighted Belt Buoy 2. Fl. R., 4 sec.	In 21 feet, 2,000 feet 225° from Buffalo Light.		11	-----
235	North Entrance Lighted Buoy 1A. Fl. W., 4 sec.	In 23 feet, on northwest side of north entrance.		10	9
236	North Entrance Lighted Buoy 3. Fl. W., 4 sec.	In 23 feet, on northwest side of north entrance, at turn.		10	9
237	Buffalo... Fl. W., 7.5 sec. Radiobeacon. Distance-Finding Station.	In 20 feet, inside breakwater, south side of north (main) entrance to harbor.		65	16
238	BUFFALO HARBOR ANCHOR- AGE. U. F. G.	On breakwater, 1,200 feet 151° from Buffalo Light- house.		21	-----
239	BUFFALO NORTH BREAK- WATER SOUTH END. F. G.	On southeast end...-----		36	13
239.3	BUFFALO COAST GUARD SLIP NORTH. U. F. R.	2,050 feet 90° from Buffalo Light.		16	-----
239.5	BUFFALO COAST GUARD SLIP SOUTH. U. F. W.	2,175 feet 96° from Buffalo Light.		16	-----
240	BUFFALO SOUTH PIER... Occ. R., 10 sec.	On pier, near outer end at Coast Guard Base.		51	-----
240.5	BUFFALO RIVER ENTRANCE... F. R. U.	On southwest corner of D. L. & W. Coal Dock.		16	-----
240.7	RANAHAN MCCARTHY MAR- INE TERMINAL. U. F. R.	Atop pile cluster on south- west corner of dock. 42 52.2 78 53.1		20	-----

(Continued at No. 290)

## CANADA AND NEW YORK

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
233	10,000 50	Powerful beam on range line only; low-power light visi- ble from all points of ap- proach. Inner end of north pier floodlighted. HORN; hand, answers sig- nals.	Fath White, square, wood; red lan- tern roof. 22	Year 1369 1922
234	350 300 mm e	Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 3 sec. Maintained by city of Buf- falo, N. Y.	Lantern on large circular building on concrete crib.	1908
234.5	30 200 mm a	Flash 0.4 sec.----- BELL, on buoy.	Red.	
235	110 200 mm a	Flash 0.4 sec.-----	Black.	
236	140 200 mm e	Flash 0.4 sec.-----	Black.	
237	1,000,000 3 e	Flash 0.5 sec., eclipse 7 sec.. DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 302 kc, groups of 4 dashes (-----). Antenna lead-in at light tower. Vessels are requested not to anchor east, or within 400 yards south of this light.	White square tower on cor- ner of white square building. Illuminated cable warning on channel side of pier. 1872 1914 DISTANCE-FINDING STA- TION. For method of op- eration see p. 11. Telephone and radiotelephone via Coast Guard Base.	1922
238	250 170 mm e	Visible only from 140° to 330°, inside of breakwater. Vessels are requested not to anchor north of this light.	Lantern on black pipe.	1922
239	700 300 mm e	-----	White bottle-shaped struc- tures. 20	1901 1903 1947
239.3	13 170 mm e	-----		1947
239.5	65 170 mm e	-----		1947
240	1,800 300 mm e	Light 8 sec., eclipse 2 sec.. HORN, diaphragm, air, blast 2 sec., silent 23 sec. Vessels are requested not to anchor near.	White skeleton structure with inclosed top. Illuminated cable warning 135 yards 127°. Storm warning signals shown at Coast Guard Base.	1914
240.5	15 e	Maintained by Delaware, Lackawanna & Western R. R. Co.		1947
240.7	300 e	Maintained by Ranahan McCarthy Marine Ter- minal.		1947

## NIAGARA RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
	<b>BLACK ROCK CHANNEL</b>				
241	<i>Black Rock Channel Entrance Lighted Buoy 2.</i> Qk. Fl. R.		In 20 feet, 350 yards 55° from Buffalo North Breakwater Light.	7	
242	<i>Black Rock Channel Lighted Buoy 3.</i> Fl. W., 5 sec.		In 20 feet, marks turn.	8	
243	STATE BREAKWATER 4. Fl. R., 5 sec.	U.	On northwest end of breakwater, north end of Eric Basin.	42	
243.5	BUFFALO BOAT CLUB. Occ. Amber, 5 sec.	U.	At entrance to basin of Motorboat Club, 660 feet 56½° from State Breakwater Light 4.	15	
244	<i>Black Rock Channel Lighted Buoy 6.</i> Fl. G., 5 sec.		In 21 feet, on west side of channel. Marks turn.	7	
245	BLACK ROCK CHANNEL 6. P. R.	U.	On pier, on east side of channel, west of marine airport.	20	
246	<i>Black Rock Channel Lighted Buoy 7.</i> Fl. G., 5 sec.		In 20 feet, at angle in west channel bank.	7	
247	<i>Black Rock Channel Lighted Buoy 10.</i> Fl. R., 5 sec.		In 20 feet, on east side of channel, off City Dock.	7	
248	<i>Black Rock Channel Lighted Buoy 9.</i> Fl. G., 5 sec.		In 20 feet, on west side of channel.	7	
249	<i>Black Rock Channel Lighted Buoy 12.</i> Fl. R., 5 sec.		In 20 feet, east side of channel.	7	
250	<i>Black Rock Channel Lighted Buoy 11.</i> Fl. G., 6 sec.		In 20 feet, on southwest side of channel, at beginning of turn.	7	
251	<i>Black Rock Channel Lighted Buoy 14.</i> Fl. R., 6 sec.		In 20 feet, on northeast side of channel, abreast buoy 11.	7	
252	<i>Black Rock Channel Lighted Buoy 18.</i> Fl. R., 6 sec.		In 20 feet, on east side of channel, abreast buoy 13.	7	
253	<i>Black Rock Channel Lighted Buoy 13.</i> Fl. G., 6 sec.		In 20 feet, on west side of channel.	7	
254	<i>Black Rock Channel Lighted Buoy 13.</i> Fl. R., 6 sec.		In 20 feet, on east side of channel.	7	
255	<i>Black Rock Channel Lighted Buoy 15.</i> Fl. G., 6 sec.		In 20 feet, on west side of channel, abreast preceding.	7	
256	BIRD ISLAND PIER 17. Fl. G., 5 sec.	U.	At angle of pier.	33	
257	<i>Black Rock Channel Lighted Buoy 20.</i> Fl. R., 5 sec.		In 20 feet, on east bank, abreast preceding.	7	
258	<i>Black Rock Channel Lighted Buoy 19.</i> Fl. G., 5 sec.		In 20 feet, on west side of channel.	7	

## NEW YORK

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
241	10 200 mm e	75 flashes per minute.	Feet Red.	Year
242	110 200 mm a	Flash 0.5 sec.	Black.	
243	50 200 mm e	Flash 0.5 sec.	Red skeleton tower, red tank-house with inclosed base.	1914 1938 1949
243.5	100 150 mm e	Light 3 sec., eclipse 2 sec. Maintained by Motorboat Club of Buffalo, N. Y.		
244	10 200 mm e	Flash 0.5 sec.	Black.	
245	300 200 mm e		Lantern on red pipe.	1935
246	10 200 mm e	Flash 0.5 sec.	Black.	
247	10 200 mm e	Flash 0.5 sec.	Red.	
248	10 200 mm e	Flash 0.5 sec.	Black.	
249	10 200 mm e	Flash 0.5 sec.	Red.	
250	17 150 mm e	Flash 2 sec.	Black.	
251	19 150 mm e	Flash 2 sec.	Red.	
252	19 150 mm e	Flash 2 sec.	Red.	
253	17 150 mm e	Flash 2 sec.	Black.	
254	19 150 mm e	Flash 2 sec.	Red.	
255	17 150 mm e	Flash 2 sec.	Black.	
256	50 200 mm a	Flash 0.5 sec.	White skeleton tower, with inclosed base.	1914 1938
257	10 200 mm e	Flash 0.5 sec.	Red.	
258	10 200 mm e	Flash 0.5 sec.	Black.	

## NIAGARA RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>BLACK ROCK CHANNEL</b>					
259	<i>Black Rock Channel Lighted Buoy 25.</i> Fl. W., 5 sec.	In 20 feet, at angle of west bank.		Fog 7	-----
260	<i>Black Rock Channel Lighted Buoy 25.</i> Fl. W., 5 sec.	In 20 feet, at angle of west bank.		7	-----
261	<i>Black Rock Channel Lighted Buoy 27.</i> Fl. W., 5 sec.	In 20 feet, at angle of west bank. East of Squaw Island.		7	-----
262	<i>Black Rock Channel Lighted Buoy 24.</i> Fl. R., 5 sec.	In 20 feet, at angle of east bank.		7	-----
263	<i>Black Rock Channel Lighted Buoy 29.</i> Fl. W., 5 sec.	In 20 feet, at angle of west bank southeast of International Bridge.		7	-----
264	<i>Black Rock Channel Lighted Buoy 26.</i> Fl. R., 5 sec.	In 20 feet, at angle of east bank, abreast preceding.		7	-----
<b>OLD CHANNEL</b>					
265	NIAGARA RIVER INTAKE CRIB. P. R. U.	In 15 feet, on crib. North of Peace Bridge.		30	-----
<b>TONAWANDA CHANNEL</b>					
266	<i>Strawberry Island Cut Lighted Buoy 1.</i> Fl. W., 4 sec.	In 22 feet.-----		6	-----
267	<i>Strawberry Island Cut Lighted Buoy 7.</i> Fl. W., 4 sec.	In 22 feet, on edge of Strawberry Island Reef, at turn.		7	-----
268	STRAWBERRY ISLAND UPPER CUT RANGE FRONT. U. P. R.	In 4 feet, on east side of river.		30	-----
269	STRAWBERRY ISLAND UPPER CUT RANGE REAR. U. P. R.	In Riverside Park, 795 feet $\frac{1}{4}$ ° from front light.		58	-----
270	STRAWBERRY ISLAND LOWER CUT RANGE FRONT. U. P. R.	On east bank, Niagara River.		34	-----
271	STRAWBERRY ISLAND LOWER CUT RANGE REAR. U. P. R.	On Fuller Street, Buffalo, 750 feet, $139\frac{1}{4}$ ° from front light.		83	-----
271.5	<i>Strawberry Island Cut Lighted Buoy 15.</i> Fl. W., 4 sec.	In 23 feet.-----		7	-----
272	<i>Strawberry Island Cut Lighted Buoy 12.</i> Fl. R., 4 sec.	In 21 feet, on northeast side of entrance to cut.		8	-----

## NEW YORK

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
259	50 200 mm e	Flash 0.5 sec.-----	Feet Black.	Year -----
260	50 200 mm e	Flash 0.5 sec.-----	Black.	-----
261	50 200 mm e	Flash 0.5 sec.-----	Black.	-----
262	10 200 mm e	Flash 0.5 sec.-----	Red.	-----
263	80 150 mm e	Flash 0.5 sec.-----	Black.	-----
264	19 150 mm e	Flash 0.5 sec.-----	Red.	-----
265	e	Maintained by city of Buffalo, N. Y.	Lantern on large concrete crib.	1870
266	80 150 mm e	Flash 0.4 sec.-----	Black.	-----
267	80 150 mm e	Flash 0.4 sec.-----	Black.	-----
268	450 300 mm e	Range is lighted throughout the 24 hours each day. Illuminates 22° to eastward and 112° to westward of range line.	White, octagonal, pyramidal tower on square pier. 1908	29
269	450 300 mm e	Illuminates 22° to eastward and 112° to westward of range line.	White, octagonal, pyramidal above first story. 1908	33
270	5,000 Rf e	Range is lighted throughout the 24 hours each day.	White daymark on white skeleton tower with inclosed base. 1908	1916
271	5,000 Rf e	-----	White daymark on skeleton tower. 1908	61 1916
271.5	140 200 mm e	Flash 0.4 sec.-----	Black.	-----
272	30 200 mm a	Flash 0.4 sec.-----	Red.	-----

## NIAGARA RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>TONAWANDA CHANNEL</b>					
273	GRAND ISLAND RANGE FRONT. F. R. U.	On east shore of island, on axis of dredged channel.		Feet 20	
274	GRAND ISLAND RANGE REAR. F. R. U.	On Island, 515 yards 313½° from front light.		53	
275	Rattlesnake Shoal Lighted Buoy 14. Fl. R., 4 sec.	In 22 feet, on south point of shoal, east side channel.		10	
276	OLD CANAL ENTRANCE. F. W. U.	On west side of entrance to Erie Canal.		12	
277	CANAL PIER. F. R. U.	On east side of entrance to Erie Canal.		12	
278	CANAL ENTRANCE EAST. F. R. U.	On east side of entrance to Erie Canal.		6	
270	CANAL ENTRANCE WEST. F. W. U.	On west side of entrance to Erie Canal.		8	
280	TONAWANDA INTAKE CRIB. F. G.	In 16 feet, on south crib at south entrance to dredged cut.		18	
281	NORTH TONAWANDA INTAKE CRIB. F. G.	In 17 feet, on middle crib, west side of dredged cut.		17	
282	LOOKPORT INTAKE CRIB. F. W.	In 18 feet, on crib abreast north end of Tonawanda Island.		13	
283	TONAWANDA HARBOR CHANNEL RANGE FRONT. F. R. U.	On east side of channel abreast Tonawanda Iron Works. 48 02.5      78 53.4		26	12
284	TONAWANDA HARBOR CHANNEL RANGE REAR. F. R. U.	670 feet 1° from front light.		42	14
<b>NIAGARA FALLS CHANNEL</b>					
284.3	LA SALLE YACHT CLUB PIER EAST. F. R. U.	43 04.4	78 59.3	6	
284.5	LA SALLE YACHT CLUB PIER WEST. F. R. U.			6	
285	NIAGARA FALLS INTAKE CRIB. Fl. W., 3 sec.	On crib, 195 feet east of middle transmission tower.		15	
286	NIAGARA FALLS TRANSMISSION LINE A. Fl. W., 3 sec.	On pier supporting tower carrying transmission line.		20	6
287	NIAGARA FALLS TRANSMISSION LINE B. Fl. W., 3 sec.	On pier supporting tower carrying transmission line.		20	6
288	NIAGARA FALLS TRANSMISSION LINE C. Fl. W., 3 sec.	On pier supporting tower carrying transmission line.		20	6
289	CHIPPAWA. F. R.	On northeast side of entrance to ship channel, at mouth of Welland River.		16	10

## NEW YORK AND CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
273	12,000 Rg e	This range is lighted throughout the 24 hours each day.	Feet White daymark on white skeleton tower with inclosed base. 1917	Year 1917
274	12,000 Rg e		27 White daymark on white skeleton tower with white tankhouse. 1917	1917
275	30 200 mm e	Flash 0.4 sec.	51 Red.	
276	50 Hl o	Maintained by State of New York.	Lantern on arm from dock corner.	1919
277	15 Hl o	Maintained by State of New York.	Lantern on piling.	1919
278	15 Hl o	Maintained by State of New York.	Red stake.	1920
279	50 Hl o	Maintained by State of New York.	Lantern on piling.	1918
280	o	Maintained by city of Tonawanda, N. Y.	White square house with red roof on concrete crib. 1893	
281	o	Maintained by city of North Tonawanda, N. Y.	White cylindrical structure with red roof on concrete crib. 1897	
282	o	Maintained by city of Lockport, N. Y.	Red cylindrical structure on concrete crib. 1909	
283	17,000 Rg e		On red post. 20	1940
284	17,000 Rg e		On red post. 85	1940
284.3	300 150 mm e	Maintained by La Salle Yacht Club, Niagara Falls, N. Y.		1948
284.5	300 150 mm e			1948
285	25 120 mm e	Flash 0.5 sec., maintained by city of Niagara Falls, N. Y.	Lantern on large concrete crib. 1911	
286	25 120 mm e	Maintained by Niagara Falls Power Co.	Aluminum cylindrical standard. 1930	
287	25 120 mm e	Maintained by Niagara Falls Power Co.	Aluminum cylindrical standard. 1930	
288	25 120 mm e	Maintained by Niagara Falls Power Co.	Aluminum cylindrical standard. 1930	
289		Defines danger zone above Niagara Falls and marks entrance to Welland River.	Ornamental iron pole. 1912	1924

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>BUFFALO HARBOR</b>					
(Continued from No. 240.7)					
<b>SOUTH ENTRANCE</b>					
200	SOUTH BUFFALO PIERHEAD F. R.	On Stony Point Breakwater.		Fed 43	14
201	SOUTH BUFFALO NORTH SIDE Fl. G., 4 sec. U.	On breakwater, north side of south entrance.		40	11
202	SOUTH BUFFALO SOUTH SIDE Gp. Fl. W. Alt. Fl. R., 30 sec. 2 W., 1 R. flashes. Radiobeacon.	On breakwater, south side of main south entrance to Buf- falo Harbor.		58	15
203	LACKAWANNA F. R. U.	On east side of entrance to slip, Lackawanna Canal.		22	4
204	LACKAWANNA WEST PIER- HEAD. F. R. U.	On west side of entrance to slip, Lackawanna Canal.		22	---
205	UNION CANAL F. R. U.	On south side of entrance to canal.		20	---
205.5	UNION CANAL NORTH SIDE F. R. U.	2,500 feet 90° from South Buffalo South Side Light.		13	---
<b>BUFFALO HARBOR APPROACH</b>					
206	Waverly Shoal Lighted Bell Buoy 1. Fl. G., 5 sec. U.	In 36 feet, 3 miles 221° from Buffalo (main) Lighthouse.		16	10
207	EBENEZER AVIATION Fl. W., 10 sec. U.	4.3 miles, 004° from South Buffalo South Side Light- house. 42 50.1                      78 47.6		---	---
208	Seneca Shoal Lighted Buoy #1 Fl. W., 4 sec. U.	In 30 feet, on northwest side of shoal.		10	9
209	HAMBURG AVIATION Fl. W., 10 sec. U.	6.8 miles, 187° from South Buffalo South Side Light- house. 42 44.2                      78 53.0		---	---
<b>SOUTH SIDE</b>					
300	ANGOLA AVIATION Fl. W., 10 sec. U.	17.9 miles, 208° from South Buffalo South Side Light- house. 42 36.0                      79 02.0		---	---
301	CATTARAUGUS CREEK F. R. U.	On west side of entrance to creek. 42 34.2                      79 08.2		38	12
302	DUNKIRK AVIATION Alt. Fl. W. and G., 10 sec. U.	3.7 miles, 92° from Dunkirk Lighthouse. 42 29.5                      79 16.9		---	---

## NEW YORK

No.	Candlepower Apparatus Illuminant	Light characteristic Pog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
290	500 300 mm e	BELL, 1 stroke every 10 sec.	Fed White skeleton tower with in- closed base.	Year 1912 1935
291	200 300 mm e	Flash 0.4 sec. ....	White bottle-shaped struc- ture.	1903
292	110,000 4 e	Each flash 1 sec., each eclipse 9 sec. DIAPHONE, two-tone, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 298 kc, groups of dash, 3 dots (--- • • •). An- tenna lead-in at light tower.	Lower part brown, cylindri- cal; upper part white, con- ical; brown fog-signal house adjoining.	1903 Telephone at this station.
293	e	Maintained by Bethlehem Steel Co., Lackawanna, N. Y.	Black post.	1909
294	e	Maintained by Bethlehem Steel Co., Lackawanna, N. Y.	Storm warning signals shown at outer end of ore dock of Bethlehem Steel Co.	1911
295	150 150 mm e	Maintained by Bethlehem Steel Co., Lackawanna, N. Y.	Red pole.	1917
295.5	200 e	Maintained by Lehigh Portland Cement Co., Buffalo, N. Y.	Red post.	1947
296	130 375 mm a	Flash 1 sec. .... BELL; sounds 1 stroke every 15 sec. (CO <sub>2</sub> ).	Black. Spar station buoy.	
297	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
298	110 200 mm a	Flash 0.4 sec. ....	Red. Spar station buoy.	
299	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
300	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
301	300 200 mm e	Light in operation throughout 24 hours each day.	White diamond daymark on black post.	1940 1945
302	W. 1,000,000 G. 300,000 Rf e	Flash 0.1 sec. Maintained by City of Dunkirk, N. Y.		



## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
303	Dunkirk Occ. W., 10 sec.	On Point Gratiot, west of entrance to Harbor. 42 20.6	79 21.2	82	17
304	Dunkirk Entrance Lighted Buoy 2. Fl. E., 4 sec.	In 16 feet, 1,450 feet 318° from Dunkirk Pierhead Light.		11	7
305	DUNKIRK PIERHEAD. F. E.	On outer end west pier, entrance to Harbor.		63	15
306	DUNKIRK HARBOR RANGE FRONT. F. G.	In 4 feet. 42 29.4	79 19.9	25	
307	DUNKIRK HARBOR RANGE REAR. F. G.	375 feet 107° from front light.		35	
308	BROCTON AVIATION. Fl. W., 10 sec.	7.5 miles, 216° from Dunkirk Lighthouse. 42 24.3	79 28.5		
309	WESTFIELD AVIATION. Fl. W., 10 sec.	17.8 miles, 224½° from Dunkirk Lighthouse. 42 18.6	79 35.9		
310	NORTH EAST AVIATION. Fl. W., 10 sec.	13 miles, 79° from Presque Isle Light. 42 12.2	79 52.0		
311	SUN OIL COMPANY DOCK. Gp. Fl. W., 12 sec. 3 flashes.	On end of dock, 3 miles east of Erie Harbor. 42 10.4	80 00.6	25	6
<b>ERIE HARBOR</b>					
312	PRESQUE ISLE FOG SIGNAL.	On northeast shore of peninsula.			
313	HAMMERMILL INTAKE. F. W.	On crib.		9	
314	ERIE HARBOR ENTRANCE RANGE FRONT. F. G.	On south pier, 1,300 feet from outer end.		35	13
315	ERIE HARBOR ENTRANCE RANGE REAR. F. G.	On south pier, 757 feet 235° from front light.		60	15
316	Erie Harbor Entrance Lighted Bell Buoy 1. Fl. G., 4 sec.	In 25 feet, on south side of entrance.		11	6
317	Erie Harbor Entrance Lighted Buoy 2. Fl. E., 4 sec.	In 25 feet, on north side of entrance.		11	7
318	Erie Harbor Outer Lighted Buoy 5. Fl. W., 4 sec.	In 25 feet, abreast Erie Harbor Pierhead.		10	9

## NEW YORK AND PENNSYLVANIA

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
303	31,000 3 e	Light 6 sec., eclipse 4 sec.	61	Year 1827 1876
304	30 200 mm a	Flash 0.4 sec.		Storm warning signals shown in Memorial Park west of the City Dock. Telephone at this station. Red.
305	300 300 mm e			White skeleton tower, enclosed base. 1837 1939
306	1,000 Rg e			White diamond daymark, on black post. 1938
307	1,000 Rg e			White diamond daymark, on black post on sea wall, 1938
308	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
309	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
310	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
311	20 150 mm e	Flash 0.5 sec., eclipse 0.5 sec., flash 0.5 sec., eclipse 0.5 sec., flash 0.5 sec., eclipse 0.5 sec. Maintained by Sun Oil Co.		Pipe standard. 1940
312		DIAPHONE, air; groups of 3 blasts every 30 sec.; 3 blasts 1 sec. each, 2 silences 1 sec. each, 1 silence 25 sec. Maintained by Hammerrmill Paper Co.		White skeleton tower, inclosed top; horn 45 feet above base. 1890 1924
313	50 e			Lantern on crib. 1912
314	45,000 Rg e			White daymark on white skeleton tower. 1940
315	45,000 Rg e			White daymark on white skeleton tower. 1940
316	25 200 mm a	Flash 0.4 sec. BELL, on buoy.		Black. Spar station buoy.
317	30 200 mm a	Flash 0.4 sec.		Red. Spar station buoy.
318	110 200 mm a	Flash 0.4 sec.		Black.

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ERIE HARBOR</b>					
319	ERIE HARBOR PIERHEAD... Occ. R., 5 sec. Radiobeacon. Distance-Finding Station.	On outer end of north pier...		Feet 42	14
320	ERIE RANGE FRONT 1..... F. R.	On west end of north pier...		60	13
321	ERIE RANGE REAR 2..... F. R.	835 feet 54½° from front light.		80	
322	Erie Harbor Lighted Buoy 9... Fl. W., 4 sec.	In 25 feet.....		11	
323	Erie Harbor Lighted Buoy 10... Fl. E., 4 sec.	In 25 feet, on north side of basin.		10	
<b>SOUTH SIDE</b>					
324	Presque Isle..... Alt. Fl. W. and R., 20 sec. U.	On northwest shore of penin- sula. 42 09.9                      80 06.9		73	16
325	ERIE AVIATION..... Alt. Fl. W. and G., 10 sec. U.	6.5 miles, 209° from Presque Isle Light. 42 05.0                      80 11.0			
326	EAST SPRINGFIELD AVIATION Fl. W., 10 sec. U.	8.5 miles, 81° from Conneaut West Breakwater Light- house. 42 00.0                      80 23.7			
<b>CONNEAUT HARBOR</b>					
327	CONNEAUT EAST BREAKWA- TER Fl. G., 4 sec. U.	On east breakwater.....		46	8
328	CONNEAUT WEST BREAKWA- TER Op. Fl. W., 12 sec. 2 flashes.	On end of west breakwater... 41 58.8                      80 33.4		80	17
329	CONNEAUT WEST PIER..... F. R. U.	On north end of west pier....		28	12
330	CONNEAUT EAST PIER..... F. G. U.	On north end of east pier....		28	12
<b>ASHTABULA HARBOR</b>					
331	POWERHOUSE BREAKWATER... F. W. U.	On north end of breakwater..		17	10

## PENNSYLVANIA AND OHIO

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
319	4,000 4 c	Light 3 sec., eclipse 2 sec... FOEN, diaphragm, air; blast 2 sec., silent 18 sec. RADIOBEACON; Transmits on 290 kc, groups of dash, dot, dash, dash (--- • --- ---). Antenna lead-in 66 feet 232° from light tower.	Feet Red square tower. 34	Year 1819 1940
320	450 300 mm e		Telephone and radiotele- phone via Coast Guard Station. White daymark on skeleton tower. 1856 54	1936
321	450 300 mm e		Storm warning signals shown on public dock, State St. extension. White oval daymark on skeleton tower. 1856 80	1924
322	110 200 mm a	Flash 0.4 sec.....	Black.	
323	30 200 mm a	Flash 0.4 sec.....	Red.	
324	W. 30,000 R. 9,000 4 c	White flash 1 sec., eclipse 9 sec., red flash 1 sec., eclipse 9 sec.	White square tower, red dwelling attached. 68	1873
325	W1,000,000 G. 300,000 Rf e	Maintained by Port Erie Corporation.		
326	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
327	50 300 mm a	Flash 0.4 sec.....	White skeleton tower with inclosed base. 1917 1936	
328	7,000 375 mm e	Flash 2 sec., eclipse 1 sec., flash 2 sec., eclipse 7 sec.  DIAPHONE, air; group of 2 blasts every 30 seconds, blast 1 sec., silent 1 sec., blast 1 sec., silent 27 sec.	Cream - colored square py- ramidal tower. 1920 1936	
329	450 300 mm e		Telephone at this station. Storm warning signals shown on high bluff west of Dock No. 1. Red post.	1835 1934
330	450 300 mm e		White pipe.	1915 1934
331	1,900 200 mm e	Maintained by Cleveland Electric Illuminating Co.	Gray skeleton tower.	1930

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
	<b>ASHTABULA HARBOR</b>			<i>Fed</i>	
332	KINGSVILLE AVIATION----- Fl. W., 10 sec. U.	7.5 miles, 104½° from Ashtabula Lighthouse.			
333	ASHTABULA WEST PIERHEAD F. B. U.	41 63.6 80 39.8 On new pierhead crib-----		46	13
334	ASHTABULA EAST BREAKWATER F. G., 4 sec. U.	On end of east breakwater, east side of entrance.		46	8
335	Ashtabula----- Fl. W., 5 sec. Radiobeacon. Distance-Finding Station.	On pierhead, 600 feet from north end of west breakwater, west side of entrance. 41 55.1 80 47.3		51	14
336	ASHTABULA INNER BREAKWATER F. G. U.	On westerly end of breakwater, east side of inner entrance of breakwater.		23	11
337	ASHTABULA WEST PIER----- F. R. U.	On east side of pier, near north end.		35	12
	<b>SOUTH SIDE</b>				
338	GENEVA AVIATION----- Fl. W., 10 sec. U.	0.5 miles, 215° from Ashtabula Lighthouse. 41 48.2 80 54.2			
339	PERRY AVIATION----- All Fl. W. and G. U.	0.5 miles, 83° from Fairport West Breakwater Lighthouse. 41 46.8 81 06.6			
340	PERRY AVIATION----- Fl. W., 10 sec. U.	8.9 miles, 108° from Fairport West Breakwater Lighthouse. 41 42.8 81 07.6			
341	Industrial Rayon Corp. Intake Crib Lighted Buoy 3. Op. Fl. W., 6 sec. 2 flashes.	In 18 feet, 4 miles 70° from Fairport Harbor entrance.		5	
	<b>FAIRPORT HARBOR</b>				
342	FAIRPORT EAST BREAKWATER EAST END Fl. B., 10 sec. U.			28	
343	DIAMOND ALKALI COMPANY OUTER CRIB Fl. R., 5 sec. U.	In 20 feet, on crib, 1,440 yards east of entrance to harbor.		24	8
344	DIAMOND ALKALI COMPANY INNER CRIB F. R. U.	On intake crib, 1 mile east of mouth of Grand River.		25	
345	FAIRPORT EAST BREAKWATER Fl. G., 4 sec. U.	On pierhead of east breakwater.		37	8

## OHIO

No.	Candlepower Apparatus Dulminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
			<i>Fed</i>	<i>Year</i>
332	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
333	450 300 mm e		White skeleton tower with inclosed base.	1935
334	50 300 mm a	Flash 0.4 sec.-----	White skeleton tower, inclosed base.	1914 1935
335	30,000 4 e	Flash 0.7 sec., eclipse 4.3 sec., DLAPHONE; air; blast 4 sec., silent 56 sec.  RADIOBEACON: Transmits on 314 kc, groups of 2 dashes, 1 dot (--- mm e). Antenna lead-in at light tower.	White cylindrical tower on white square house. 42	1836 1916
			DISTANCE-FINDING STATION. For method of operation see p. 11. Radiotelephone via Coast Guard Station. Storm warning signals shown daytime only at Coast Guard Station.	1913 1935
336	250 170 mm e		White pole.	1913 1935
337	250 170 mm e		White skeleton tower with inclosed base.	1893 1935
338	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
339	W 1,000,000 G. 300,000 Rf e	Maintained by Administrator of Civil Aeronautics.		
340	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
341	35 150 mm e	Flash 0.3 sec, eclipse 0.4 sec., Flash 0.3 sec. eclipse 5 sec., Maintained by Industrial Rayon Corporation.	Black.	
342	7 150 mm a	Flash 1 sec.-----	White post.	1945
343	60 300 mm a	Flash 0.5 sec. Maintained by Diamond Alkali Co.	Gray skeleton tower.	1917
344	300 mm a	Maintained by Diamond Alkali Co.	Gray iron tripod.	1912 1949
345	50 300 mm a	Flash 0.4 sec.-----	White skeleton tower with inclosed base. 31	1913 1925

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>FAIRPORT HARBOR</b>					
346	FAIRPORT WEST BREAKWATER EXTENSION. U. F. R.	On outer end of breakwater extension.		Feet 46	14
347	Fairport West Breakwater. Occ. W., 5 sec. Marker Radiobeacon.	On breakwater, west side of entrance to harbor. 41 48.1                      81 16.9		56	16
348	FAIRPORT WEST PIER. U. F. R.	On north end of pier, west side of inner entrance.		34	13
349	FAIRPORT EAST PIER. U. F. R.	On north end of pier, east side of inner entrance.		28	12
<b>SOUTH SIDE</b>					
350	PAINESVILLE WATER WORKS INTAKE. U. Gp. Fl. W., 6 sec.	In 12 feet. Marks location of crib.		6	-----
351	MENTOR OUTER EAST BREAKWATER. U. F. R.	On outer end of east breakwater. 41 43.7                      81 21.2		21	11
352	MENTOR INNER EAST BREAKWATER. U. F. R.	On inner end of breakwater.		33	11
353	KIRTLAND AVIATION. U. Fl. W., 10 sec.	10.2 miles, 198° from Fairport West Breakwater Lighthouse. 41 37.4                      81 21.1		-----	-----
353.5	CHAGRIN WEST PIER. U. F. R.	On west bank at mouth of Chagrin River.		18	-----
355	Cleveco Wreck Lighted Buoy. I. Qk. Fl. W.	In 80 feet, 9 miles 8° from Cleveland East Entrance Light.		11	9
356	Euclid Beach Intake Lighted Buoy. Qk. Fl. R.	In 50 feet, 5.6 miles 16½° from Cleveland East Entrance Light. Marks outer limits of construction area.		8	-----
<b>CLEVELAND HARBOR</b>					
358	CLEVELAND WATERWORKS INTAKE CRIB. Occ. G., 10 sec.	In 54 feet, 2¼ miles 328° from Cleveland West Pierhead Light.		55	15
358.5	Gordon Park Breakwater Lighted Buoy I. Fl. G., 4 sec.	In 22 feet, 3,600 feet 90° from Cleveland East Entrance Light.		7	-----

## OHIO

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
346	800 300 mm e	-----	Feet White skeleton tower, with inclosed base.	Year 1935
347	6,000 4 e	Light 3 sec., eclipse 2 sec. DIAPHONE, air; group of 2 blasts and 1 blast "21" every 30 sec.; blast 1 sec., silent 1 sec., blast 1 sec., silent 3 sec., blast 1 sec., silent 23 sec. RADIOBEACON: Transmits on 800 kc. a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	White square tower on corner of square building. Telephone and radiotelephone via Coast Guard Station. Storm warning signals shown daytime only at Coast Guard Station.	1910 1921
348	450 300 mm e	-----	White skeleton tower, with inclosed base.	1912
349	400 800 mm e	-----	White pole.	1940 1925
350	45 150 mm e	Flash 0.3 sec., eclipse 0.2 sec., flash 0.3 sec., eclipse 5.2 sec. Maintained by City of Painesville.	Yellow structure.	1929 1948
351	250 170 mm e	-----	White diamond daymark on white pole. Storm warning signals shown from flagstaff at Mentor Harbor Yachting Club.	1940
352	250 170 mm e	-----	White diamond daymark on white post.	1940
353	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.	-----	-----
353.5	45 200 mm e	Maintained by Chagrin Lagoons Yacht Club, Willoughby, Ohio.	-----	1947
355	110 200 mm a	Flashes interrupted by eclipse.	Red and black horizontal bands.	-----
356	80 200 mm a	75 flashes per minute. Maintained by Merritt Chapman & Scott Corp., Cleveland, Ohio.	Red.	-----
358	700 300 mm e	Light 5 sec., eclipse 5 sec. DIAPHONE, air; blast 3 sec., silent 27 sec. BELL, hand, when diaphone is disabled. Maintained by city of Cleveland.	Gray square house on red cylindrical crib.	1898
358.5	30 200 mm e	Flash 0.4 sec. Maintained by City of Cleveland, Ohio.	Black.	-----

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CLEVELAND HARBOR</b>					
359	CLEVELAND EAST ENTRANCE. Occ. W., 4 sec.	On northeast end of break- water, northwest side of en- trance to East Basin.		59	15
360	Cleveland East Basin Intake Lighted Buoy 1. Fl. W., 4 sec.	Marks intake crib off foot East 53d Street.		6	----
361	Cleveland Harbor Channel Lighted Buoy 2. Fl. R., 4 sec.	In 25 feet, 1¼ miles, 88° from Cleveland West Pierhead Light.		6	----
363	CLEVELAND EAST PIERHEAD. Op. Fl. G., 6 sec. U. 3 flashes.	On outer pierhead, main en- trance to harbor.		39	11
364	Cleveland West Pierhead. Alt. Fl. W. and R., 10 sec. Radiobeacon. Distance-Finding Station.	On outer pierhead, main en- trance to harbor. 41 30.5                      81 43.1		63	16
365	CLEVELAND EAST BREAK- WATER. U. Op. Fl. G., 10 sec. 2 flashes.	On northeast side of main entrance.		38	7
366	CLEVELAND WEST BREAK- WATER. U. Op. Fl. R., 10 sec. 2 flashes.	At southwest side of main entrance.		33	8
367	CLEVELAND EAST PIER. F. G. U.	On pier, near outer end.		36	13
368	CLEVELAND WEST PIER. F. R. U.	On pier, near outer end.		36	13
368.5	EDGEWATER YACHT CLUB BASIN EAST BREAKWATER. Fl. W., 4 sec. U.	5,850 feet 210° from Clevel- land West Pierhead Light.		20	----
368.7	EDGEWATER YACHT CLUB BASIN WEST BREAKWATER. Fl. R., 4 sec. U.	5,850 feet 211° from Clevel- land West Pierhead Light.		20	----
<b>SOUTH SIDE</b>					
369	ROCKY RIVER OUTER. F. G. U.	On outer end of east pier. 41 29.5                      81 50.3		35	12

## OHIO

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
350	9,000 300 mm a	Light 2 sec., eclipse 2 sec.--- DIAPHONE, air; blast 2 sec., silent 18 sec.	Feet White skeleton tower, en- closed top. 47	Year 1915
360	50 150 mm e	Flash 0.4 sec. Maintained by American Steel and Wire Co.	Submarine cable to shore; do not anchor near. Storm warning signals shown daytime only at Northeast Yacht Club from about May 15 to September 30.	Black.
361	19 150 mm e	Flash 0.4 sec.-----	Red.	
363	200 4 a	3 flashes 0.2 sec. each, 2 eclipses 0.4 sec. each, 1 eclipse 4.6 sec.	White conical tower. 31	1911
364	W. 30,000 R. 10,000 4 e	White flash 1 sec., eclipse 4 sec., red flash 1 sec., eclipse 4 sec. DIAPHONE, air; group of 2 blasts every 30 sec. blast 2 sec., silent 2 sec., blast 1 sec., silent 25 sec	White conical tower. 55 Radiotelephone at this sta- tion. Storm warning signals shown daytime only at Coast Guard Station and at Lake- side Yacht Club in the east harbor basin.	1911 DISTANCE-FINDING STA- TION. For method of op- eration see p. 11.
365	45 300 mm a	Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 8 sec.	White skeleton tower, with inclosed base. 27	1892 1911
366	60 300 mm a	Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 8 sec.	White skeleton tower, with inclosed base. 23	1885 1931
367	400 800 mm e	-----	White square skeleton tower, with inclosed base. 84	1866 1936
368	450 300 mm e	-----	White skeleton tower on tank house, with inclosed base. 27	1831 1917 1948
368.5	12 150 mm e	Flash 0.4 sec. Maintained by Edgewater Yacht Club, Inc., Cleveland, Ohio.	White post.	1948
368.7	3 150 mm e	Flash 0.4 sec. Maintained by Edgewater Yacht Club, Inc., Cleveland, Ohio.	White post.	1948
369	250 170 mm e	-----	White skeleton tower with tank house, with inclosed base.	1941

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
370	ROCKY RIVER INNER..... F. G. U.	Near the inner end of the east pier. 41 29.4                      81 50.2		Feet 47	12
371	AVON POWER HOUSE BASIN EAST..... F. W. U.	On east elbow of the outer breakwater. 41 30.4                      82 03.3		18	11
<b>LORAIN HARBOR</b>					
372	LORAIN EAST BREAKWATER... Gp. Fl. G., 8 sec. U. 2 flashes.	On east side of entrance to harbor.		37	7
373	Lorain West Breakwater..... Occ. W., 10 sec.	On west side of entrance to harbor. 41 28.6                      82 11.5		58	15
374	LORAIN EAST PIER..... Fl. G., 4 sec. U.	On pier, near outer end, east side of inner entrance.		32	7
375	LORAIN WEST PIER..... Fl. R., 5 sec. U.	On pier, near outer end, west side of inner entrance.		32	7
375.5	NATIONAL TUBE COMPANY DOCK..... Occ. R., 4 sec. U.	3 miles upstream from mouth in Black River, adjacent to ore dock.		8	-----
<b>SOUTH SIDE</b>					
376	NORTH AMHERST AVIATION Fl. W., 10 sec. U.	6.6 miles, 203° from Lorain West Breakwater Light- house. 41 23.2                      82 14.1		-----	-----
377	VERMILION EAST PIER..... F. G. U.	On outer end of east pier..... 41 23.2                      82 14.1		20	9
378	VERMILION WEST OUTER..... F. R. U.	On west pier, near outer end. 41 25.7                      82 21.3		26	12
379	VERMILION WEST INNER..... F. R. U.	293 yards 181° from preced- ing. 41 25.7                      82 21.3		40	13
380	VERMILION AVIATION..... Fl. W., 10 sec. U.	4.0 miles, 229° from Vermil- ion Outer Light. 41 23.3                      82 25.1		-----	-----
381	Huron..... Gp. Fl. W., 6 sec. 2 flashes.	On west pierhead..... 41 24.3                      82 32.6		80	17
382	Huron Entrance Lighted Buoy 1. Fl. G., 4 sec.	In 25 feet.....		10	-----
383	HURON INNER..... F. R. U.	At band of west pier.....		71	16
384	HURON AVIATION..... Fl. W., 10 sec. U.	8.1 miles, 224° from Huron Lighthouse. 41 22.5                      82 35.4		-----	-----

## OHIO

No.	Candlepower Apparatus Diameter	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
370	250 170 mm e	-----	Feet White post.	Year 1941
371	300 e	Maintained by Cleveland Electric Illuminating Co.	Storm warning signals shown daytime only southeast of inner light. Black tripod.	1927 1941
372	45 300 mm a	Flash 0.3 sec, eclipse 0.9 sec, flash 0.3 sec., eclipse 4.5 sec.	White skeleton tower, with white tankhouse.	1909 1914
373	18,000 4 e	Light 5 sec, eclipse 5 sec... DIAPHONE, air; 1 blast and group of 2 blasts "12" every 30 sec.; blast 1 sec., silent 3 sec., blast 1 sec., silent 1 sec., blast 1 sec., silent 23 sec.	Cement color square tower on southeast corner of square building. Tele- phone at this station.	1908 1919
374	45 300 mm a	Flash 0.4 sec.....	Storm warning signals shown on east side of river near Coast Guard Station.	1919
375	45 200 mm e	Flash 1 sec.....	White skeleton tower, with white tankhouse.	1836 1922
375.5	60 100 mm e	Light 2 sec., eclipse 2 sec. Maintained by National Tube Co., Lorain, Ohio.	Timber intake skimmer.	1949
376	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.	-----	-----
377	80 170 mm e	-----	White post.	1940
378	450 800 mm e	-----	White skeleton tower.	1847 1929
379	450 800 mm e	-----	Rod day mark on red post.	1934
380	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.	Storm warning signals shown daytime only on east bank of river at Vermilion Yacht Club.	-----
381	7,000 375 mm e	Flash 1 sec, eclipse 1 sec., flash 1 sec., eclipse 3 sec. DIAPHONE, air; group of 2 blasts every 30 sec.; blast 1 sec., silent 1 sec., blast 1 sec., silent 27 sec.	Cream-colored square py- ramidal tower.	1836 1938
382	20 200 mm a	Flash 0.4 sec.....	Telephone at this station. Storm warning signals shown at foot of Main St. on west side of river.	-----
383	7,000 Rf e	-----	White skeleton structure.	1919
384	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.	-----	-----

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SANDUSKY HARBOR</b>					
385	Sandusky Bay Radiobeacon.			Feet	
		On west side of Cedar Point, 1,275 feet 151° from Sandus- ky Inner Range Front Light.			
386	Sandusky Bay Outside Lighted Buoy 2. Fl. B., 4 sec.	In 21 feet, at north side of en- trance to channel.		10	7
387	SANDUSKY PIERHEAD. Occ. W., 6 sec.	On east end of jetty, south side of entrance to bay.		66	16
388	Sandusky Bay Lighted Buoy 11. Fl. W., 4 sec.	In 42 feet		11	
389	SANDUSKY BAY OUTER RANGE FRONT. F. G.	On axis of straight channel. 41 29.1                      82 42.3		82	18
390	SANDUSKY BAY OUTER RANGE REAR. F. G.	2,625 feet 237° from front light.		61	15
391	SANDUSKY BAY INNER RANGE FRONT. F. R.	On axis of straight channel, at junction of west jetty and Sand Point dike.		27	
392	SANDUSKY BAY INNER RANGE REAR. F. R.	1,500 feet 17° from front light.		61	
393	Sandusky Inner Lighted Buoy 14. Fl. R., 4 sec.	In 22 feet		6	
394	Sandusky Inner Lighted Buoy 18. Fl. R., 4 sec.	In 21 feet		11	
395	Sandusky Inner Lighted Buoy 19. Fl. W., 4 sec.	In 18 feet		6	
396	Sandusky Inner Lighted Buoy 24. Fl. R., 4 sec.	In 17 feet		11	
397	Sandusky Inner Lighted Buoy 26. Fl. R., 4 sec.	In 18 feet, at bend in channel abreast B. & O. R. R. Piers.		11	
398	Dock Channel Lighted Buoy 30. Fl. R., 4 sec.	In 18 feet		6	
399	SANDUSKY DOCK CHANNEL. F. G.                      U.	Foot of McDonough Street.		19	
400	Dock Channel Lighted Buoy 35. Fl. W., 4 sec.	In 20 feet		11	
401	Dock Channel Lighted Buoy 36. Fl. R., 4 sec.	In 20 feet		11	

## OHIO

No.	Candlepower Apparatus Emitting	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
385		RADIOBEACON: Transmits on 314 kc., groups of 1 dash, 2 dots, 1 dash (— • • —).	Feet	Year
			Telephone and radiotele- phone at this station.	
386	30 200 mm a	Flash 0.4 sec.	Red.	Spar station buoy.
387	15,000 375 mm e	Light 4 sec., eclipse 2 sec. DIAPHONE, air; blast 3 sec., silent 27 sec.	White skeleton tower, in- closed top, on concrete orb.	1921 1928
388	110 200 mm a	Flash 0.4 sec.	Black.	55 1928
389	17,000 Rf e		White daymark on white skeleton tower with white tankhouse on concrete orb.	21 1900 1928
390	17,000 Rf e		White daymark on white skeleton tower on concrete orb.	54 1900
391	17,000 Rf e	Submarine cable to a point just east of Coast Guard wharf on Cedar Point. Do not anchor.	Red daymark on red skele- ton tower with red tank- house on concrete orb.	17 1896 1928
392	17,000 Rf e		Red daymark on red skele- ton tower on concrete orb.	52 1898
393	20 150 mm e	Flash 0.4 sec.	Red.	
394	20 200 mm a	Flash 0.4 sec.	Red.	
395	80 150 mm e	Flash 0.4 sec.	Black.	
396	30 200 mm a	Flash 0.4 sec.	Red.	
397	30 200 mm a	Flash 0.4 sec.	Red.	
398	20 150 mm e	Flash 0.4 sec.	Red.	
399	200 170 mm e		On black pipe. Storm warning signals shown on City Dock.	1937
400	110 200 mm a	Flash 0.4 sec.	Black.	
401	30 200 mm a	Flash 0.4 sec.	Red.	

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SANDUSKY EXIT CHANNEL</b>					
402	SANDUSKY EXIT CHANNEL RANGE FRONT. U. F. G.	In 9 feet, 4,025 feet, 138 $\frac{1}{2}$ °	°	33	Feet
403	SANDUSKY EXIT CHANNEL RANGE REAR. U. F. G.	In 8 feet, 1,000 feet 64° from front light.		60	
404	Sandusky Exit Channel Lighted Buoy 11. Fl. W., 4 sec.	In 21 feet		11	
405	Sandusky Exit Channel Lighted Buoy 9. Fl. W., 4 sec.	In 21 feet		11	
406	Sandusky Exit Channel Lighted Buoy 6. Fl. R., 4 sec.	In 21 feet		11	
407	Sandusky Exit Channel Lighted Buoy 5. Fl. W., 4 sec.	In 21 feet		11	
408	Sandusky Exit Channel Lighted Buoy 2. Fl. R., 4 sec.	In 21 feet		11	
<b>SANDUSKY HARBOR</b>					
409	SANDUSKY INTAKE CRIB. F. W. U.	1,200 feet offshore from water- works.		16	
410	SANDUSKY SLUDGE BASIN. Occ. E., 3 sec. U.	On northeast corner of Sludge Basin Wall, 675 feet 172° from Sandusky Intake Crib Light.		13	
411	BATTERY PARK RANGE FRONT. F. R. U.	At entrance to East Battery Park Basin.		12	
412	BATTERY PARK RANGE REAR. F. R. U.	36 feet 153° from front light.		15	
413	SANDUSKY BAY TRANSMIS- SION LINE A. U. Fl. W., 3 sec.	On pier supporting tower car- rying transmission line.		15	
413.5	SANDUSKY BAY TRANSMIS- SION LINE B. U. Fl. W., 3 sec.	On pier supporting tower carrying transmission line.		15	
414	SANDUSKY BAY WEST END. Fl. W., 4 sec. U.	In 5 feet. 41 28.2	82 57.7	8	7
415	SANDUSKY AVIATION. Fl. W., 10 sec. U.	0.8 miles, 194° from Marble- head Lighthouse. 41 23.8	82 45.0		
<b>SOUTH PASSAGE</b>					
416	Marblehead. Fl. E., 10 sec.	On northeast end of point. 41 32.2	82 42.7	67	16

## OHIO

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
402	17,000 Rg e		Feet	Year
402	17,000 Rg e		White slatted daymark on skeleton tower, with in- closed base, on steel sheet pile foundation. 1939	
403	17,000 Rg e		White slatted daymark on skeleton tower, with tank- house, on steel sheet pile foundation. 1939	
404	110 200 mm a	Flash 0.4 sec.	Black.	
405	110 200 mm a	Flash 0.4 sec.	Black.	
406	30 200 mm a	Flash 0.4 sec.	Red.	
407	110 200 mm a	Flash 0.4 sec.	Black.	
408	30 200 mm a	Flash 0.4 sec.	Red.	
409	60 e	Maintained by city of San- dusky.	Round red-brick house with green roof on concrete crib. 1916	1937
410	20 150 mm e	Light 2 sec., eclipse 1 sec. Maintained by city of San- dusky.	White pipe.	1937
411	100 300 mm e	Range maintained by city of Sandusky.	Black pipe.	1930
412	100 300 mm e		Black pipe. Storm warning signals shown daytime only east of range lights. 1930	
413	40 a	Flash 0.3 sec. Maintained by Ohio Public Service Co., Elyria, Ohio.	White skeleton tower on con- crete pier. 1926	
413.5	40 a	Flash 0.3 sec. Maintained by Ohio Public Service Co., Elyria, Ohio.	White skeleton tower on con- crete pier. 1926	
414	40 150 mm e	Flash 0.4 sec. Maintained from May 1 to Oct. 15.	Pne dolphin.	1941 1948
415	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
416	350,000 3 $\frac{1}{2}$ e	Flash 0.3 sec., eclipse 9.7 sec.	White conical tower. 70 Telephone and radiotele- phone via Coast Guard Station.	1821



## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH PASSAGE</b>					
416.5	KELLY ISLAND LIME AND TRANSPORT DOCK. U. 2 F. R.	In 18 feet, 5,600 feet 301° from Marblehead Light.		Feet	
417	VICKERY AVIATION..... Fl. W., 10 sec. U.	7.5 miles, 175° from Port Clinton Light.			
418	South Passage Lighted Buoy 2. Fl. R., 4 sec.	In 18 feet.....		10	7
419	Scott Point Shoal Lighted Buoy 1. Fl. W., 4 sec.	In 20 feet, on northeast part of shoal.		10	9
420	Starus Island Reef Lighted Buoy. I. Qk. Fl. W.	In 24 feet, on west side of reef.		11	9
421	Starus Island Lighted Buoy 4. Fl. R., 4 sec.	In 29 feet, southerly side of reef.		10	7
422	Catawba Island Lighted Buoy 1. Fl. W., 4 sec.	In 22 feet, 3.8 miles 201° from South Bass Island Light.		10	9
423	South Bass Island..... Alt. Fl. W. and R., 30 sec.	On southwest point of island. 41 37.7 82 50.5		60	15
424	Green Island..... Fl. W., 2.5 sec. U.	Near west end of island..... 41 38.7 82 52.1		80	14
<b>WEST END</b>					
425	Kelleys Island Lighted Buoy 1. Fl. G., 4 sec.	In 30 feet off northeast point of island.		11	
426	Kelleys Island Shoal West End Lighted Buoy 2. Fl. R., 4 sec.	In 26 feet.....		10	7
426.5	Gull Island Shoal Lighted Buoy 4. Fl. R., 4 sec.	In 40 feet, on south end of shoal.		10	7
427	BALLAST ISLAND..... Fl. W., 4 sec. U.	On northeast end of island... 41 40.7 82 47.0		92	10
427.5	Rock Shoal Lighted Buoy 2... Fl. R., 4 sec.	In 22 feet, on end of shoal west of Kelleys Island.		8	7
428	FERRY MEMORIAL MONU- MENT. U. Gp. Fl. W., 10 sec. 3 flashes.	On east side of South Bass Island. 41 39.2 82 48.6		335	26
429	Peach Orchard Point Lighted Buoy 2. Fl. R., 4 sec.	In 17 feet, off point, in Put- in-Bay.		11	7
430	PORT CLINTON PENINSULA AIRPORT. Alt. Fl. W. and G., 10 sec.	3.1 miles 93° from Port Clin- ton Light. 41 31.0 82 52.5			

## OHIO

No.	Candlepower Apparatus Dominant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
416.5		Maintained by Kelly Island Lime and Transport Co., Cleveland, Ohio.	Pat	Year 1949
417	1,000,000 R f e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
418	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy. Do not pass between this buoy and American Eagle Shoal Buoy.	
419	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
420	110 200 mm a	Flashes interrupted by eclipse.	Red and black horizontal bands. Spar station buoy.	
421	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
422	140 200 mm e	Flash 0.4 sec.....	Black.	
423	W. 30,000 R. 10,000 4 e	White flash 1.5 sec., eclipse 13.5 sec., red flash 1.5 sec., eclipse 13.5 sec. Light ob- scured by trees from 173° to 249°.	Red square tower projecting from square dwelling. 1897 46 Telephone at this station.	
424	500 375 mm a	Flash 0.5 sec. Light ob- scured by woods from 238° to 273°.	White skeleton tower with white tankhouse. 1854 67	1939
425	20 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
426	30 200 mm a	Flash 0.4 sec.....	Red. Storm warning signals shown daytime only near dock on southwest side of Kelleys Island.	
426.5	30 200 mm e	Flash 0.4 sec.....	Red.	
427	170 300 mm a	Flash 0.4 sec.....	White skeleton tower, with white tankhouse. 1916 67	
427.5	30 200 mm a	Flash 0.4 sec.....	Red.	
428	11,000 300 mm e	Flash 1 sec., eclipse 1 sec., flash 1 sec., eclipse 1 sec., flash 1 sec., eclipse 5 sec.	On roof of monument. 1940 Storm warning signals shown daytime only at Village Park, Put-in-Bay.	
429	30 200 mm a	Flash 0.4 sec.....	Red.	
430	W. 1,000,000 G. 300,000	Flash 0.1 sec. Maintained by City of Port Clinton.		

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST END</b>					
431	PORT CLINTON Occ. R., 3 sec. U.	On outer end of west pier entrance to Port Clinton Harbor.		Feet 26	12
432	OAK HARBOR AVIATION Fl. W., 10 sec. U.	41 31.1	82 56.2	10.5 miles, 255° from Port Clinton Light.	
433	GENOA AVIATION Fl. W., 10 sec. U.	41 28.8	83 07.8	17.5 miles, 210° from West Sister Island Light.	
434	Niagara Reef Lighted Buoy 5 Fl. W., 4 sec.	41 30.7	83 17.4	In 24 feet, on north side	11 9
435	West Sister Island Fl. W., 4 sec. U.	On southwest end of island.		55	13
		41 44.2	83 06.6		
436	TOLEDO WATER WORKS IN- TAKE CRIB. U. Gp. Fl. W., 12 sec. 3 flashes.	In 16 feet, east of Cedar Point.		50	11
		41 41.0	83 15.5		
<b>MAUMEE BAY</b>					
437	Toledo Harbor Gp. Fl. W. Alt. R. Fl., 30 sec. 2 W., 1 R. flashes. Radiobeacon. Distance-Finding Station.	In 21 feet, off outer entrance to straight channel.		72	16
		41 45.7	83 19.7		
438	Maumee Bay Entrance Lighted Buoy 1. Gk. Fl. W.	In 22 feet, southeast side of entrance.		11	9
439	Maumee Bay Entrance Lighted Buoy 2. Fl. R., 4 sec.	In 22 feet		10	7
440	Maumee Bay Lighted Buoy 1 B. Fl. W., 4 sec.	In 23 feet		11	
441	Maumee Bay Lighted Buoy 9. Fl. W., 4 sec.	In 20 feet		11	
442	Maumee Bay Lighted Buoy 10. Fl. R., 4 sec.	In 20 feet		10	
443	Maumee Bay Lighted Buoy 15. Fl. W., 4 sec.	In 20 feet		10	
444	Maumee Bay Lighted Buoy 16. Fl. R., 4 sec.	In 20 feet		10	
444. 5	Maumee Bay Lighted Buoy 19. Fl. W., 4 sec.	In 20 feet		6	
445	Maumee Bay Lighted Buoy 20. Fl. R., 4 sec.	In 20 feet, on north side of channel.		10	

## OHIO

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
431	1,100 5 e	Light 2 sec., eclipse 1 sec.	Feet White square pyramidal tower, concrete pier. 24	Year 1833 1896
432	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
433	1,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
434	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
435	380 375 mm a	Flash 0.4 sec. Light ob- scured by trees on north- east side of island through aro of about 85°; other scattered trees obscure light at intervals.	Cement colored conical tow- er, covered way to dwelling. 53	1848
436	200 200 mm e	Flash 0.4 sec., eclipse 0.6 sec., flash 0.4 sec., eclipse 0.6 sec.; flash 0.4 sec., eclipse 0.6 sec. Maintained by City of Toledo, Ohio.	Gray and buff circular build- ing surmounting crib.	1941
437	100,000 3/4 e	Each flash 1 sec., each eclipse 0 sec. DIAPHONE, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 292 kc., groups of 2 dashes, 2 dots (— — • •). Antenna lead-in at light tower.	Buff square 3-story brick dwelling, fog-signal house attached. 70	1904
			Radiotelephone at this sta- tion. DISTANCE-FINDING STA- TION. For method of op- eration see p. 11.	
438	300 200 mm e 110 200 mm a	Winter light, Fl. W., 10 sec., flash 0.7 sec., after Dec. 5. 75 flashes per minute.	Black. Spar station buoy.	
439	30 200 mm a	Flash 0.4 sec.	Red.	
440	110 200 mm a	Flash 0.4 sec.	Black.	
441	110 200 mm a	Flash 0.4 sec.	Black.	
442	30 200 mm a	Flash 0.4 sec.	Red.	
443	110 200 mm a	Flash 0.4 sec.	Black.	
444	30 200 mm a	Flash 0.4 sec.	Red.	
444. 5	80 150 mm e	Flash 0.4 sec.	Black.	
445	30 200 mm a	Flash 0.4 sec.	Red.	

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>MAUMEE BAY</b>					
446	STRAIGHT CHANNEL RANGES MAUMEE BAY OUTER FRONT AND INNER REAR. F. G.	On northeast end of artificial island.		42	14
447		1,240 feet 237 $\frac{3}{4}$ ° from front light.		64 25	16 12
448	MAUMEE CRIB OUTER NORTH- ERLY. F. R.	At widest part of crib of Mau- mee Bay Straight Channel Ranges.		10	-----
449	MAUMEE CRIB INNER NORTH- ERLY. F. R.			10	-----
450	MAUMEE CRIB INNER SOUTH- ERLY. F. R.			10	-----
451	MAUMEE CRIB OUTER SOUTH- ERLY. F. R.			10	-----
452	Maumee Bay Lighted Buoy 81. Fl. W., 4 sec.			In 20 feet.....	6
453	Maumee Bay Lighted Buoy 82. Fl. E., 4 sec.	In 20 feet.....	6	-----	
454	Maumee Bay Lighted Buoy 83. Fl. W., 4 sec.	In 20 feet.....	10	-----	
454.5	Maumee Bay Lighted Buoy 84. Fl. E., 4 sec.	In 20 feet.....	6	-----	
455	Maumee Bay Lighted Buoy 87. Fl. W., 4 sec.	In 20 feet.....	6	-----	
456	Maumee Bay Lighted Buoy 88. Fl. E., 4 sec.	In 20 feet.....	6	-----	
457	Maumee Bay Lighted Buoy 82. Fl. E., 4 sec.	In 23 feet.....	11	-----	
457.3	Maumee Bay Lighted Buoy 83. Fl. W., 4 sec.	In 22 feet.....	6	-----	
457.5	Maumee Bay Lighted Buoy 88A. Fl. W., 4 sec.	In 23 feet.....	6	-----	
458	Maumee Bay Lighted Buoy 85. Fl. W., 4 sec.	In 23 feet.....	10	-----	
459	Maumee Bay Lighted Buoy 86. Fl. E., 4 sec.	In 18 feet.....	6	-----	
460	Maumee Bay Lighted Buoy 88. Fl. R., 4 sec.	In 20 feet, on north side of channel, at bend.	8	-----	
461	Maumee Bay Lighted Buoy 87. Fl. W., 4 sec.	In 24 feet, south side of chan- nel, below bend.	11	-----	
462	Bay View Park Lighted Buoy 40. Fl. R., 4 sec.	In 21 feet.....	6	-----	

## OHIO

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
446	50,000 6 Rg e 170 300 mm a	Obscured from 80° to 125°.. Winter light, Fl. W., 4 sec., flash 0.4 sec.	Feet Red square pyramidal skele- ton tower, black lantern and watch room. 42	Year 1884 1898
447	70,000 60,000 6 Rg e 170 300 mm a	Upper light is rear light of east range; lower light is front light of west range. Each light visible 90° on each side of range line. Winter light, Fl. W., 4 sec., flash 0.4 sec.	Red square pyramidal skele- ton tower, two black lan- terns, and watch rooms. 64 25	1834 1898
448	150 300 mm e	-----	Lantern on pedest. 5	1913
449	150 300 mm e	-----	Lantern on pedest. 5	1913
450	150 300 mm e	-----	Lantern on pedest. 5	1913
451	150 300 mm e	-----	Lantern on pedest. 5	1913
452	80 150 mm e	Flash 0.4 sec.	Black.	
453	20 150 mm e	Flash 0.4 sec.	Red.	
454	110 200 mm a	Flash 0.4 sec.	Black.	
454.5	20 150 mm e	Flash 0.4 sec.	Red.	
455	80 150 mm e	Flash 0.4 sec.	Black.	
456	20 150 mm e	Flash 0.4 sec.	Red.	
457	30 200 mm a	Flash 0.4 sec.	Red.	
457.3	80 150 mm e	Flash 0.4 sec.	Black.	
457.5	80 150 mm e	Flash 0.4 sec.	Black.	
458	110 200 mm a	Flash 0.4 sec.	Black.	
459	20 150 mm e	Flash 0.4 sec.	Red.	
460	30 200 mm a	Flash 0.4 sec.	Red.	
461	110 200 mm a	Flash 0.4 sec.	Black.	
462	20 150 mm e	Flash 0.4 sec.	Red.	

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH SIDE</b>					
478	Port Colborne Inner Fl. W., 5 sec. Radio beacon.	On outer end of west break- water. 42 52.1	C. 70 15.2	50	14
470	PORT COLBORNE EAST BREAK- WATER. Fl. G. U.	On outer end of breakwater	C.	24	-----
480	MOHAWK ISLAND Fl. W. U.	2¼ miles east of Port Mait- land.	C.	70	16
481	PORT MAITLAND RANGE FRONT. F. W.	On west pier, 100 feet from south end; entrance to Grand River. 42 51.1	C. 79 34.8	51	12
482	PORT MAITLAND RANGE REAR. F. W.	On west pier, at angle, 900 feet 23° from front light.	C.	75	15
482.5	PORT DOVER EAST PIER Fl. W. U.	20 feet shoreward from outer end of east pier 42 46.9	C. 80 12.1	-----	-----
483	PORT DOVER RANGE FRONT P. G.	110 feet from outer end of west pier. 42 46.9	C. 80 12.2	34	18
484	PORT DOVER RANGE REAR F. G.	1,670 feet 22¼° from front light.	C.	45	8
485	Long Point Fl. W., 8 sec. Radio beacon. Distance-Finding Station.	On point 1,200 feet from east end. 42 32.9	C. 80 08.0	97	17
486	PORT BURWELL WEST BREAK- WATER OUTER. Fl. W. U.	On outer end of west break- water.	C.	42	13
487	PORT BURWELL WEST BREAK- WATER INNER. Fl. W. U.	On outer end of old portion of breakwater.	C.	30	12

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
478	-----	BELL; sounds continuously during fog. RADIOBEACON: Transmits on 286 kc., 3 groups of 2 dashes and 2 dots each, followed by 3 dashes (----- . . . ----- . . . ----- . . . ----- . . .).	Feet White square concrete tower, upper part sloping. 46	Year 1903 1929
479	-----	-----	Red square pyramidal skele- ton tower on concrete base.	1906
480	-----	-----	White circular stone.	1848
481	-----	-----	White, square, wood; on brown skeleton frame; red lantern. 41	1846 1940
482	-----	TYFON, air; group of 2 blasts every 60 sec.; blast 2¼ sec., silent 3 sec., blast 2¼ sec., silent 52 sec. Horn points 202°.	Square skeleton tower; white fog-signal house on inner end of pier.	1916 1920
482.5	-----	-----	Lantern on skeleton tower.	1948
483	-----	TYFON, electric; blast 2 sec., silent 28 sec.	White, square, wood; red lantern. 35	1846 1937
484	-----	-----	Storm signal at end of west pier. White skeleton tower; wood- en lantern. 45	1897 1937
485	100,000	DIAPHONE, air; blast 3 sec., silent 27 sec. Horn points south. RADIOBEACON: Transmits on 286 kc., groups of 1 dot, 1 dash, 2 dots (. --- . .), followed by 2 long dashes.	White octagonal pyramidal tower, red lantern; white fog-signal house 180 yards 281° from tower. 102	1843 1916
486	-----	-----	Storm signal 150 yards north- easterly from lighthouse. DISTANCE FINDING STA- TION. For method of operation see p. 11. Lantern on pole.	-----
487	-----	DIAPHONE, air; group of 3 blasts every 60 sec., 3 blasts 2.5 sec. each, 2 si- lences 4 sec. each, 1 silence 44.5 sec. Bell if diaphone disabled.	Red skeleton tower on con- crete base. 25	1914

## LAKE ERIE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH SIDE</b>					
488	Port Burwell F. W.	On east side of harbor, 780 feet north of shore line. C.	780 42 38.7      80 48.4	90	17
489	PORT BURWELL RANGE FRONT. F. G.	On southwest corner of east pier. C.	42 38.4      80 48.4	24	10
490	PORT BURWELL RANGE REAR. F. G.	On east pier, 1,300 feet from front light. C.	355°	36	10
491	PORT STANLEY F. G.	On west pier. C.		20	9
492	PORT STANLEY BREAKWATER RANGE FRONT. U.	On outer end of breakwater. C.		29	12
493	PORT STANLEY RANGE REAR. F. G.	On shore 1,600 feet from front light. C.	344°	50	14
494	POINTE AUX PINS Fl. W. U.	On south end of point, 2.7 miles east of Rondeau Har- bor. C.		40	---
495	RONDEAU HARBOR EAST BREAKWATER. U.	16 feet from outer end of east breakwater. C.		36	13
496	RONDEAU HARBOR RANGE FRONT. F. G.	On outer end of west break- water pier. C.	42 15.2      81 54.8	29	12
497	RONDEAU HARBOR RANGE REAR. F. G. U.	On inner end of west pier, 1,350 feet 12° from front light. C.		56	---
498	Southeast Shoal Op. Fl. W., 25 sec. 4 flashes. Radiobeacon. Distance-Finding Station.	In 39 feet, near southeast end of shoal. C.	41 49.7      82 27.7	68	14
499	Pelee Point Lighted Bell Buoy. Fl. R.	300 feet south of Old Dummy Foundation. C.	41 52.2      82 30.4		
500	Grubb Reef Lighted Buoy Fl. R.	7,800 feet, 51° from Pelee Passage Lighthouse. C.		8	4
501	Pelee Passage Op. Fl. W., 7.5 sec. 2 flashes.	On north end of Middle Ground. C.	41 51.3      82 34.8	75	16

## CANADA

No.	Candlepower Apparatus Luminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
488		Radio station, 0.4 mile east of lighthouse; call VBF.	Feet White octagonal, wood; red octagonal lantern. 55	Year 1840
489			Storm signal mast south of lighthouse. Steel pole.	1906 1938
490			Steel pole.	1906 1938
491			Steel pole. 35	1844 1934
492		DIAPHONE, air; blast 2.5 sec., silent 27.5 sec. Horn points 154°.	Red steel pole. 27	1909 1943
493			White triangular daymark on mast.	1934 1941 1919 1945
494			Mast.	
495			Red skeleton tower, red lantern. 38	1876 1941
496		DIAPHONE, air; group of 3 blasts every 60 sec.; 3 blasts 2.5 sec. each, 2 si- lences 3 sec. each, 1 silence 46.5 sec.	Pyramidal structure sup- porting lantern. 24	1912 1937
497		Leave on port hand when entering.		1947
498		Flash, eclipse 3 sec.; flash, eclipse 3 sec.; flash, eclipse 3 sec.; flash, eclipse 16 sec. DIAPHONE, air; groups of 2 blasts every 60 sec.; blast 2 sec., silent 3 sec., blast 2 sec., silent 53 sec. RADIOBEACON: Transmits on 286 kc, groups of 4 dots (••••) followed by a long dash.	White pyramidal structure with black stripes on square pier.	1927
499		BELL, on buoy	Red.	
500			Red.	
501		Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 5.5 sec. Winter light, flashing white. DIAPHONE, air; blast 4 sec., silent 26 sec. Horn points north.	Red lantern on white circular tower on brown cylindrical pier. 66	1902

## LAKE ERIE AND DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH SIDE</b>					
501. 5	Armenia Wreck Lighted Buoy. Fl. R., 3 sec.	41 52.7	82 38.2	18	
502	SCUDDER WHARF F. O.	On elevator, north side of Pelee Island.		18	
503	PELEE ISLAND WEST WHARF. F. R.	On wharf, west side of island.		18	
504	LEAMINGTON OUTER Fl. G.	Near outer end of Govern- ment pier.		26	
505	LEAMINGTON Fl. G.	42 01.5	82 36.2	31	12
506	KINGSVILLE F. R.	42 01.6	82 43.8	27	6
507	KINGSVILLE WEST BREAK- WATER. Fl. G.	10 feet from outer end of ex- tension to west breakwater pier.		20	
508	Colchester Reef Fl. W.	41 56.0	82 53.6	72	16
509	MIDDLE SISTER ISLAND Fl. G.	North end of island.		35	12
<b>AMHERSTBURG OUTER CHANNEL</b>					
510	Amherstburg Outer Channel Lighted Radiobeacon Buoy 1. Fl. W., 4 sec.	In 26 feet, 14,050 feet 163° from Detroit River Light.		13	10
511	Amherstburg Outer Channel Lighted Bell Buoy 2. Qk. Fl. R.	In 26 feet, at lower entrance of channel		10	7
512	Amherstburg Outer Channel Lighted Buoy 5. Fl. W., 4 sec.	In 24 feet		10	9
513	Amherstburg Outer Channel Lighted Buoy 6. Fl. R., 4 sec.	In 24 feet		10	7
514	Amherstburg Outer Channel Lighted Buoy 9. Fl. W., 4 sec.	In 24 feet		12	10
515	Amherstburg Outer Channel Lighted Buoy 10. Fl. R., 4 sec.	In 24 feet		10	7

## CANADA AND MICHIGAN

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
501. 5		Flash 0.5 sec.	Feet	Year
502		HORN, hand, answers signals.	Lantern on freight shed.	1916
503		HORN, hand, answers sig- nals.	White mast, shed at base.	1939
504			Lantern on white pole.	1916
505		HORN, hand, answers sig- nals.	On south face of warehouse.	1880
506		HORN, hand, answers sig- nals.	Mast.	1937
507			21	1886
508			White, hexagonal, wood; on circular stone pier; red lan- tern.	1885
509			60	1936
			On wooden tower.	1942
				1945
510	140 200 mm e	Flash 0.4 sec. RADIOBEACON: Transmits on 296 kc., 2 groups of ¼ sec. dashes, with 1¼ sec. interval between groups, for 15¼ sec., silent 1¼ sec. In event of failure of one signal unit, 1 group of ¼ sec., dashes for 7 sec., silent 23 sec.	Black.	Spar station buoy.
511	30 200 mm e	75 flashes per minute BELL on buoy. Radar Reflector.	Red.	Nun station buoy.
512	140 200 mm e	Flash 0.4 sec.	Black.	Spar station buoy.
513	30 200 mm e	Flash 0.4 sec.	Red.	Spar station buoy.
514	140 200 mm e	Flash 0.4 sec.	Black.	Spar station buoy.
515	35 200 mm e	Flash 0.4 sec.	Red.	Spar station buoy.

## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>AMHERSTBURG OUTER CHANNEL</b>					
516	Detroit River Gp. Fl. W., 15 sec. 2 flashes. Radiobeacon. Distance-Finding Station. LOW WATER WARNING LIGHT. (See p. 91.)	In 20 feet at entrance of river. 42 00.1	83 08.5	55	15
<b>AMHERSTBURG CHANNEL</b>					
517	Lighted Buoy 13 D. Fl. W.	In 25 feet, 4,200 feet 357° from Detroit River Light- house.	C.		
518	Lighted Buoy 14 D. Gk. Fl. R.	In 20 feet, 1,750 feet 38° from Detroit River Light- house.	C.		
519	Lighted Buoy 23 D. Fl. W.	In 22 feet.	C.		
520	Lighted Buoy 24 D. Fl. R.	In 21 feet.	C.		
521	Lighted Buoy 32 D. Fl. R.	In 21 feet.	C.		
522	Bar Point Lighted Bell Buoy. Gk. Fl. W.	In 23 feet, at junction of Amherstburg and Living- stone Channels.	C.		
<b>HACKETT REACH</b>					
523	Lighted Buoy 33 D. Fl. R.	In 21 feet, off Bar Point, 2.8 miles 11¼° from Detroit River Lighthouse.	C.		
524	Lighted Buoy 43 D. Fl. W.	In 21 feet.	C.		
525	Lighted Buoy 44 D. Fl. R.	In 21 feet.	C.		
526	Light Boat 45 D. Fl. W.	In 21 feet.	C.		
528	Light Boat 46 D. Fl. R.	In 21 feet.	C.		
529	Lighted Buoy 49 D. F. W.	In 21 feet.	C.		

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Fluorimant	Light characteristic For signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
516	25,000 4 e  200 200 mm e	Flash 0.9 sec., eclipse 2.8 sec., flash 0.9 sec., eclipse 10.4 sec. Light displayed one hour before sunset until one hour after sunrise. Winter light, Fl. W., 5 sec., flash 0.5 sec. HORN, diaphragm, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 804 kc, groups of 2 dashes(---). Antenna lead-in at light tower. Low-water warning light, amber colored (83,000 op.), 50 feet above water on south side of lantern gal- lery; will show either fixed or occulting, light 2 sec., eclipse 2 sec., in direction of Amherstburg Outer Channel when dangerously low water prevails in Am- herstburg Channel.	Feet White conical tower on hex- agonal pier; upper portion of tower is black. 49.	Year 1885
			Radiotelephone at this sta- tion.	
			DISTANCE-FINDING STA- TION. For method of oper- ation, see p. 11. Radiophone broadcasts low- water warnings on 2,182 kc.	
517			Black.	
518			Red.	
519			Black.	
520			Red.	
521			Red.	
522		BELL, on buoy.	Red and black horizontal bands.	
523			Red.	
524			Black.	
525			Red.	
526			Black.	
528			Red.	
529			Black spar.	

## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>AMHERSTBURG CHANNEL</b>					
<b>HACKETT REACH</b>					
530	Lighted Buoy 50 D. F. R.	In 21 feet	C.	Feet	
531	Bois Blanc. Fl. W.	On south end of island. 42 05.2	C. 83 07.2	56	16
532	ANCHORAGE Float Light 52 D. F. R.	In 21 feet, 1,300 feet from Bois Blanc Light- house.	104° C.		
533	Float Light 54 D. F. R.	In 21 feet	C.		
534	Float Light 56 D. F. R.	In 21 feet	C.		
535	AMHERSTBURG RANGE FRONT F. G.	On east bank of river at Am- herstburg. 42 06.8	C. 83 06.8	54	9
530	AMHERSTBURG RANGE REAR F. G.	558 feet 15° from front light.	C.	78	9
<b>AMHERSTBURG REACH</b>					
537	ELLIOTT POINT RANGE FRONT F. G.	1,900 feet, 133° from Bois Blanc Lighthouse. 42 05.0	C. 83 06.9	50	6
538	ELLIOTT POINT RANGE REAR. F. G.	1,080 feet 175½° from front light.	C.	70	6
539	Lighted Buoy 57 D. Qk. Fl. W.	In 21 feet, 1,500 feet 36½° from Bois Blanc Light- house.	C.		
540	Light Boat 58 D. Fl. R.	In 21 feet	C.		
541	Light Boat 59 D. F. W.	In 21 feet	C.		
542	Light Boat 60 D. Fl. R.	In 21 feet	C.		
543	Light Boat 61 D. Fl. W.	In 21 feet	C.		
544	Light Boat 62 D. Fl. R.	In 21 feet	C.		
545	Float Light 63 D. F. W.	In 21 feet	C.		
<b>LEMERLIN CROSSING CHANNEL</b>					
546	Light Boat 64 D. Fl. R.	In 21 feet	C.		
547	Light Boat 65 D. Fl. W.	In 21 feet	C.		
548	Light Boat 66 D. Fl. R.	In 21 feet	C.		
549	Light Boat 67 D. Fl. W.	In 21 feet	C.		
550	Lighted Buoy 68 D. Fl. R.	In 21 feet	C.		

## CANADA

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
530			Feet	Year
			Red spar.	
531			White circular stone tower, red lantern.	1837
			40	1924
532		Marks anchorage	Lantern on float moored to red spar buoy.	
533		Marks anchorage	Lantern on float moored to red spar buoy.	
534		Marks anchorage	Lantern on float moored to red spar buoy.	
535		Storm warning signals shown at entrance of the dock at Waterworks park, Am- herstburg.	Yellow circular daymark on skeleton tower.	1889 1943
536			Yellow circular daymark on skeleton tower.	1889 1943
			68	
537			Yellow daymark on white skeleton tower.	1898
			50	1943
538			Yellow daymark on white skeleton tower.	1898
			70	1943
539			Black.	
540			Red.	
541	e		Lantern on float moored to black spar buoy.	
542			Red.	
543	e		Black.	
544	e		Red.	
545	e		Lantern on float moored to black spar buoy.	
546	e		Red.	
547	e		Black.	
548	e		Red.	
549	e		Black.	
550			Red.	



## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>AMHERSTBURG CHANNEL</b>					
LIMEKILN CROSSING CHANNEL					
551	Light Boat 71 D. Fl. W.	In 21 feet	C.	Feet	
552	Light Boat 78 D. Fl. R.	In 21 feet	C.		
553	LIMEKILN CROSSING RANGE FRONT. F. R.	On southwest end of old ferry wharf. 42 07.5	C. 83 06.9	31	2
554	LIMEKILN CROSSING RANGE REAR. F. R.	1,050 feet 3¼° from front light.	C.	66	2
555	Lighted Buoy 73 D. Qk. Fl. W.	In 21 feet	C.		
556	Lighted Buoy 74 D. Fl. R.	In 21 feet	C.		
<b>BALLARD REEF CHANNEL</b>					
557	FORT MALDEN RANGE FRONT. F. W.	On east bank of river, 0.5 mile above head of Bois Blanc Island. 42 06.9	C. 83 06.7	71	4
558	FORT MALDEN RANGE REAR. F. R.	383 feet 162¼° from front light.	C.	98	4
559	GROSSE ILE SOUTH CHANNEL RANGE FRONT. F. G. F. G.	On north end of Grosse Ile. 42 11.1	C. 83 09.6	28	
560	GROSSE ILE SOUTH CHANNEL RANGE REAR. F. G.	1,495 feet 342¼° from front light.		53	
561	Float Light 76 D. F. R.	In 21 feet	C.		
562	Float Light 78 D. F. R.	In 21 feet	C.		
563	LIVINGSTONE CHANNEL UPPER ENTRANCE. Alt. Fl. W. and R., 15 sec.	In 18 feet, at junction of Livingstone and Ballard Reef channels. 42 08.2	C. 83 07.4	42	9
564	Ballard Reef Channel Lighted Buoy 80 D. Fl. R.	In 21 feet, nearly abreast preceding.	C.		
565	Ballard Reef Channel Lighted Bell Buoy 81 D. Fl. G.	In 21 feet	C.		
566	Ballard Reef Channel Lighted Buoy 82 D. Fl. R.	In 21 feet	C.		
567	Ballard Reef Channel Lighted Buoy 83 D. Fl. W.	In 24 feet	C.		

## CANADA AND MICHIGAN

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
551			Feet Black.	Year
552			Red.	
553		Range leads from Elliot Point Range line to Fort Malden Range line.	Lantern on mast. 31	1914 1937
554			White skeleton tower, hexagonal lantern. 51	1914 1937
555			Black.	
556			Red.	
557		Range marks Ballard Reef channel.	Yellow disk daymark on skeleton tower, white base. 50	1889 1943
558			Yellow disk daymark on skeleton tower, red base. 80	1889 1943
559	19,000 Rf e	Visible on range line only. Light displayed continuously.	Square pyramidal tower, white from range line, brown from other points of view. 33	1891 1895
560	500 50 19,000 Rf e	Visible around horizon. Visible on range line only. Light displayed continuously.	Square pyramidal tower, white from range line, brown from other points of view. 54	1891 1895
561			Lantern on float moored to red spar buoy.	
562			Lantern on float moored to red spar buoy.	
563	3,000 4 fov	White light 10 sec., red light 5 sec. Winter Light Fl. W. Amber light projecting vertical beam displayed from balcony. BELL; 1 stroke every 5 sec.	White square tower, upper part pyramidal; red lantern on square pier. 42	1915
564			Storm signal station.	
564			Red.	
565		BELL, on buoy.	Black.	
566			Red.	
567			Black.	

## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>BALLARD REEF CHANNEL</b>					
563	Ballard Reef Channel Lighted Buoy 84 D. Fl. R.	In 24 feet	C.	Feet	
569	GROSSE ILE AVIATION..... Fl. W., 10 sec. U.	On lower end of Grosse Ile. 42 05.8	83 08.7		
570	CARLTON AVIATION..... Fl. W., 10 sec. U.	1 1/4 miles northeast of Carlton. 42 05.0	83 22.7		
571	Ballard Reef Lighted Buoy 85. Fl. G., 4 sec.	In 30 feet		10	7
572	Ballard Reef Lighted Buoy 86. Fl. R., 4 sec.	In 25 feet		10	7
573	GROSSE ILE..... Fl. W., 2.5 sec. U.	In 3 feet, at east shore of Grosse Ile. 42 10.5	83 08.4	45	
574	Ballard Reef Lighted Buoy 87. Fl. G., 4 sec.	In 27 feet		10	7
<b>FIGHTING ISLAND CHANNEL</b>					
576	FIGHTING ISLAND SOUTH..... Fl. R., 2.5 sec. U.	In 6 feet, on east side of south end of channel. 42 10.4	83 08.1	35	10
576	MAMAJUDA..... Fl. W., 4 sec. U.	On east side of Mamajuda Island. 42 11.5	83 08.2	25	
577	Livingstone Outer Channel Lighted Buoy 15. Fl. W., 4 sec.	In 20 feet, 1,000 feet 280° from Detroit River Light- house.		10	
578	Livingstone Outer Channel Lighted Buoy 7. Fl. W., 4 sec.	In 20 feet		10	
579	Livingstone Outer Channel Lighted Bell Buoy 1. Fl. W., 6 sec.	In 20 feet, at south end of channel.		12	
<b>LIVINGSTONE CHANNEL</b>					
580	Livingstone Channel Lighted Buoy 27. Fl. G., 4 sec.	In 25 feet, on west side of north entrance to channel.		12	
581	LIVINGSTONE CHANNEL 25... F. G. U.	On west side near north en- trance.		34	
582	LIVINGSTONE CHANNEL 26... F. R. U.	On east side near north en- trance to cofferdam section, abreast light 25.		34	
583	LIVINGSTONE CHANNEL 23... Occ. G., 2 sec. U.	On west side of channel, in- side of cofferdam section.		34	
584	LIVINGSTONE CHANNEL 24... Occ. R., 2 sec. U.	On east side of channel, abreast light 23.		34	

## CANADA AND MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
568			Feet	Year
568			Red.	
569	2,000,000	Operated by U. S. Navy on request only.	On top of hangar.	
570	2,000,000	Maintained by Administra- tor of Civil Aeronautics.		
571	30	Flash 0.4 sec.	Black. Spar station buoy.	
572	200 mm e	Flash 0.4 sec.	Red. Spar station buoy.	
573	200 mm e	Flash 0.5 sec.	White octagonal tower, upper part pyramidal.	1894 1906
574	30	Flash 0.4 sec.	Black.	
575	140	Flash 0.5 sec. 140 op. along upstream and downstream channels diminishing to 10 op. around remainder of horizon.	Red skeleton tower on tank house, on pier.	1916 1948
576	110	Flash 0.4 sec.	Black skeleton tower on tank house on concrete pier.	1849 1921
577	140	Flash 0.4 sec.	Black. Spar station buoy.	
578	140	Flash 0.4 sec.	Black. Spar station buoy.	
579	110	Flash 1 sec. BELL, on buoy.	Black. Spar station buoy.	
580	30	Flash 0.4 sec.	Black. Spar station buoy.	
581	40		Black column and tank house on pier.	1915 1936
582	50		Red column and tank house on pier.	1912 1936
583	40	Light 1 sec., eclipse 1 sec.	Black column and tank house on pier.	1912 1936
584	50	Light 1 sec., eclipse 1 sec.	Red column and tank house on pier.	1912 1936

## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LIVINGSTONE CHANNEL</b>					
585	LIVINGSTONE CHANNEL 21... F. G. U.			Fast 34	----
586	LIVINGSTONE CHANNEL 22... F. E. U.			34	----
587	LIVINGSTONE CHANNEL 19... Occ. G., 2 sec. U.			34	----
588	LIVINGSTONE CHANNEL 20... Occ. R., 2 sec. U.			34	----
589	LIVINGSTONE CHANNEL 17... F. G. U.			34	----
590	LIVINGSTONE CHANNEL 18... F. R. U.			34	----
591	LIVINGSTONE CHANNEL 15... Occ. G., 2 sec. U.			34	----
592	LIVINGSTONE CHANNEL 16... Occ. R., 2 sec. U.			34	----
593	LIVINGSTONE CHANNEL 13... F. G. U.			34	----
594	LIVINGSTONE CHANNEL 14... F. R. U.			34	----
595	Livingstone Channel Lighted Buoy 7. Fl. G., 4 sec.			13	----
596	Livingstone Channel Lighted Buoy 8. Fl. R., 4 sec.			13	----
597	Livingstone Channel Lighted Buoy 1. Fl. G., 4 sec.			13	----
<b>HICKORY ISLAND CHANNEL</b>					
598	Hickory Island Channel Lighted Buoy 8. Fl. R., 4 sec.			6	----
598.3	GROSSE ILE YACHT CLUB HARBOR ENTRANCE. U. Occ. G., 1 sec.			42 05.3	83 09.1
598.5	Grosse Ile Yacht Club Harbor Entrance Lighted Buoy 2. Occ. R., 1 sec.				

## MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
585	40 300 mm a	-----	Fast Black column and tank house on pier.	Year 1922 1938
586	30 200 mm a	-----	Red column and tank house on pier.	1912 1938
587	40 300 mm a	Light 1 sec., eclipse 1 sec.---	Black column and tank house on pier	1912 1936
588	50 300 mm a	Light 1 sec., eclipse 1 sec.---	Red column and tank house on pier.	1915 1936
589	40 300 mm a	-----	Black column and tank house on pier.	1922 1936
590	50 300 mm a	-----	Red column and tank house on pier.	1915 1938
591	40 300 mm a	Light 1 sec., eclipse 1 sec.---	Black column and tank house on pier.	1912 1938
592	50 300 mm a	Light 1 sec., eclipse 1 sec.---	Red column and tank house on pier.	1912 1936
593	40 300 mm a	-----	Black column and tank house on pier.	1912 1938
594	50 300 mm a	-----	Red column and tank house on pier.	1912 1936
595	35 200 mm e	Flash 0.4 sec.-----	Black. Spar station buoy.	
596	35 200 mm e	Flash 0.4 sec.-----	Red. Spar station buoy.	
597	30 200 mm e	Flash 0.4 sec.-----	Black.	
598	20 150 mm e	Flash 0.4 sec.-----	Red.	
598.3	130 mm e	Light 0.5 sec., eclipse 0.5 sec. Maintained by Grosse Ile Yacht Club, Grosse Ile, Mich.	Black.	1948
598.5	130 mm e	Light 0.5 sec., eclipse 0.5 sec. Maintained by Grosse Ile Yacht Club, Grosse Ile, Mich.	Red.	

## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>FIGHTING ISLAND CHANNEL</b>					
599	Fighting Island Channel Lighted Buoy 90. Fl. R., 4 sec.	In 34 feet, on east side of channel, opposite Mamajuda Light.		12	
600	Fighting Island Channel Lighted Buoy 91. Fl. W., 4 sec.	In 33 feet, on west side of channel.		12	
601	Fighting Island Channel Lighted Buoy 92. Fl. R., 4 sec.	In 22 feet, on east side of channel.		13	
602	GRASSY ISLAND Fl. W., 4 sec.	On north end of Grassy Island. 42 13.4      83 08.0		26	
603	Fighting Island Channel Lighted Buoy 96. Fl. R., 4 sec.	In 36 feet, on east side of channel.		10	
604	Fighting Island Channel Lighted Buoy 97. Fl. W., 4 sec.	In 34 feet, on west side of channel.		11	
605	FIGHTING ISLAND NORTH Fl. R., 2.5 sec.	In 13 feet, on east side of channel, at upper entrance.		35	
<b>WYANDOTTE CHANNEL</b>					
606	Wyandotte Channel South Entrance Lighted Buoy 2. Fl. R., 6 sec.	In 24 feet, on east side of channel opposite Grosse Ile South Channel Range.		6	
607	Grosse Ile Spit Lighted Buoy. I. Qk. Fl. W.	In 24 feet at end of shoal.		6	
608	Wyandotte Channel Lighted Buoy 16. Fl. R., 4 sec.	In 23 feet.		6	
609	Wyandotte Channel North Entrance Lighted Buoy. I. Qk. Fl. W.	In 23 feet.		8	
<b>TRENTON CHANNEL</b>					
609.5	Trenton Channel Lighted Buoy 1. Qk. Fl. G.	In 21 feet, marks southern limit of channel in turning basin.		6	
610	Trenton Channel Lighted Buoy 5. Fl. W., 4 sec.	In 21 feet, off Elizabeth Park.		6	
611	Trenton Channel Lighted Buoy 10. Fl. R., 4 sec.	In 21 feet, on east side of channel.		6	
612	Trenton Channel Lighted Buoy 9. Fl. W., 4 sec.	In 21 feet, off White Star Refining Co.		6	
613	Trenton Channel Lighted Buoy 14. Fl. R., 4 sec.	In 21 feet, on east side of channel.		6	
614	Trenton Channel Lighted Buoy 13. Fl. W. 4 sec.	In 21 feet, on west side of channel.		6	

## DETROIT RIVER

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel, or buoy	
			Top of lantern above ground	Established Rebuilt
599	30 200 mm e	Flash 0.4 sec.	Red.	Year
600	140 200 mm e	Flash 0.4 sec.	Black.	Spar station buoy.
601	25 200 mm e	Flash 0.4 sec.	Red.	Spar station buoy.
602	110 200 mm a	Flash 0.4 sec.	Black skeleton tower on tank house on concrete pier.	24 1849 1921
603	35 200 mm e	Flash 0.4 sec.	Red.	
604	140 200 mm e	Flash 0.4 sec.	Black.	
605	100 200 mm e	Flash 0.5 sec.	Skeleton tower on pier.	1917 1948
606	20 150 mm e	Flash 1 sec.	Red.	
607	80 150 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands.	Spar station buoy.
608	20 150 mm e	Flash 0.4 sec.	Red.	
609	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands.	Spar station buoy.
609.5	30 200 mm e	75 flashes per minute.	Black.	
610	80 150 mm e	Flash 0.4 sec.	Black.	
611	20 150 mm e	Flash 0.4 sec.	Red.	
612	80 150 mm e	Flash 0.4 sec.	Black.	
613	20 150 mm e	Flash 0.4 sec.	Red.	
614	80 150 mm e	Flash 0.4 sec.	Black.	

## DETROIT RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>TRENTON CHANNEL</b>					
615	Trenton Channel Lighted Buoy 18. Fl. R., 4 sec.	In 21 feet, on east side of channel at turn.		6	
616	Trenton Channel Lighted Buoy 19. Fl. W., 4 sec.	In 21 feet, on west side of channel.		6	
617	Trenton Channel Lighted Buoy 24. Fl. R., 4 sec.	In 23 feet, on east side of channel.		6	
618	Trenton Channel Lighted Buoy 23. Fl. W., 4 sec.	In 24 feet, on west side of channel.		6	
<b>ECORSE CHANNEL</b>					
619	MICHIGAN STEEL WATER INTAKE. U. Fl. W., 3 sec.	On west side of channel, opposite lower end of Mud Island.		5	
620	Ecorse Channel Lighted Buoy 5. Fl. W., 4 sec.	In 26 feet, 2,600 feet 310° from Fighting Island North Light.		8	
621	ECORSE. U. F. G.	On west side of river, on Dupont Chemical Co. Dock. 42 14.8 83 07.8		38	
<b>ABOVE FIGHTING ISLAND</b>					
622	Rouge River Canal Entrance Lighted Buoy 8. Fl. R., 4 sec.	In 22 feet, at north side of entrance to canal.		10	
623	ROUGE RIVER CANAL INNER ENTRANCE. U. F. G.	On inner entrance crib, southerly side of channel.		25	
624	GRASSY ISLAND NORTH CHANNEL RANGE FRONT. U. Occ. G., 1 sec.	On north end of flats, north end of island. 42 13.8 83 08.2		30	
625	GRASSY ISLAND NORTH CHANNEL RANGE REAR. U. F. G.	1,980 feet 207° from front light.		50	
626	FORD AIRPORT. U. Fl. W., 10 sec.	Southeast of Dearborn. 42 18.0 83 14.0			
628	Belle Isle West End Lighted Buoy. I. Gk. Fl. G.	In 28 feet, at end of shoal off southwest end of Belle Isle.		9	
629	BELLE ISLE. U. F. G.	On southeast point of Belle Isle. 42 20.4 82 57.6		77	17
630	WILLIAM LIVINGSTONE MEMORIAL. U. Occ. W., 5 sec.	On easterly end of Belle Isle. 42 20.8 82 57.2		58	15

## MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
615	20 150 mm e	Flash 0.4 sec.-----	Feet Red.	Year
616	80 150 mm e	Flash 0.4 sec.-----	Black.	
617	20 150 mm e	Flash 0.4 sec.-----	Red.	
618	80 150 mm e	Flash 0.4 sec.-----	Black.	
619	30 150 mm e	Flash 0.3 sec. Maintained by Michigan Steel Corp.	Pile, red rectangular day- mark.	1930
620	140 200 mm e	Flash 0.4 sec.-----	Black.	
621	500 300 mm e	-----	Black skeleton tower on tankhouse on dock. 30	1895 1936
622	80 200 mm e	Flash 0.4 sec.-----	Red.	
623	140 200 mm e	-----	Black skeleton tower on tankhouse on pier.	1924 1937
624	3,000 Rg e 90 200 mm e	Light 0.5 sec., eclipse 0.5 sec. Visible on range line only. Light 0.5 sec., eclipse 0.5 sec. Visible around horizon.	Red daymark on black square skeleton tower. 32	1897 1933
625	3,000 Rg e	Visible on range line only.---	Red daymark on black skele- ton tower. 51	1897 1917
626	1,000,000 Rf e	Operated by Ford Motor Co. from dusk until 11 p. m. and thereafter on request.	Red and black horizontal bands. Spar station buoy.	
628	30 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands. Spar station buoy.	
629	1,100 300 mm e	-----	Cream-colored lookout tower of Coast Guard Station. 69	1892 1943
630	11,000 4 e	Light 4 sec., eclipse 1 sec.---	Telephone and radiotele- phone via Coast Guard Station. Storm warning signals shown here.	White pyramidal monu- mental structure. 1930

## DETROIT RIVER AND LAKE ST. CLAIR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ABOVE FIGHTING ISLAND</b>					
631	<i>Peach Island Lighted Buoy 4.</i> Fl. R., 4 sec.	In 28 feet, on southerly end of shoal.		Red 12	
632	<i>Belle Isle Upper Lighted Buoy.</i> I. Qk. Fl. W.	In 28 feet, at junction of channels above Belle Isle.		10	
633	<b>PEACH ISLAND.</b> Fl. R., 4 sec.	In 6 feet. 42 20.9	82 58.6	32	8
634	<b>WATERWORKS INTAKE CRIB.</b> Fl. W., 5 sec.	In 20 feet, at head of Belle Isle. 42 21.1	82 58.0	40	8
635	<b>WATERWORKS INTAKE LA- GOON.</b> Fl. R., 6 sec.	1½ miles 246° from Windmill Point Light, at head of Belle Isle.		22	
636	<i>Belle Isle North Channel Lighted Buoy 7.</i> Fl. W., 4 sec.	In 25 feet, marks edge of channel.		10	
637	<i>Belle Isle North Channel Lighted Buoy 5.</i> Fl. G., 4 sec.	In 23 feet, northeast of Belle Isle.		9	7
637.5	<i>Detroit Edison Lighted Buoy 1A.</i> Fl. G., 4 sec.	In 22 feet, 1,500 feet 322° from Lagoon Light.		6	
638	<b>DETROIT CITY AIRPORT.</b> Fl. W., 10 sec.	In Detroit, 5 miles 308° from Windmill Point Light. 42 24.1	83 00.2		
639	<b>WINDMILL POINT.</b> Op. Fl. W., 10 sec. 3 flashes.	On southwest corner revetment Marine Hospital Reservation. 42 21.5	82 55.4	42	14
<b>LAKE ST. CLAIR</b>					
640	<b>PEACH ISLAND RANGE FRONT.</b> Occ. W., 2 sec. Occ. W., 2 sec.	In 20 feet, southwest end of lake. 42 21.5	82 54.4	38	13
641	<b>PEACH ISLAND RANGE REAR</b> F. R.	3,558 feet 227°43' from front light.		66	16
642	<i>Lake St. Clair Lighted Buoy 1.</i> Qk. Fl. W.	In 24 feet, abreast turn in channel.		12	10
643	<i>Lake St. Clair Lighted Buoy 2.</i> Fl. R., 4 sec.	In 24 feet.		12	7
644	<i>Lake St. Clair Lighted Buoy 9.</i> Fl. W., 4 sec.	In 24 feet.		13	10
645	<i>Lake St. Clair Lighted Buoy 10</i> Fl. R., 4 sec.	In 24 feet.		13	7
646	<i>Lake St. Clair Lighted Buoy 19.</i> Fl. W., 4 sec.	In 24 feet.		10	9
647	<i>Lake St. Clair Lighted Buoy 20.</i> Fl. R., 4 sec.	In 24 feet.		10	7
648	<i>Lake St. Clair Lighted Bill Buoy 24.</i> Fl. R., 4 sec.	In 24 feet, on east side of channel.		10	7
649	<i>Lake St. Clair Lighted Buoy 23.</i> Fl. W., 4 sec.	In 24 feet.		10	9
650	<b>LAKE ST. CLAIR.</b> Fl. G., 5 sec.	In 24 feet, on westerly side of channel at turn. 42 27.9	82 45.3	52	15

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Bobuilt
631	30 200 mm e	Flash 0.4 sec.	Red.	Spar station buoy. Year
632	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands.	Spar station buoy.
633	50 300 mm a	Flash 0.4 sec.	Red skeleton tower and tank house on concrete base.	1929
634	70 200 mm a	Flash 0.5 sec. Maintained by the city of Detroit.	Gray stone tower on pier.	1913
635	15 200 mm e	Flash 1 sec. Maintained by the city of Detroit.	Red mast on tank house on concrete pier.	1936
636	140 200 mm e	Flash 0.4 sec.	Black.	
637	30 200 mm e	Flash 0.4 sec.	Black.	
637.5	17 200 mm e	Flash 0.4 sec.	Black.	
638	2,000,000 Rf e	Maintained by city of Detroit.	On top of north end of bangar.	
639	12,000 6 e	3 flashes, 1 sec. each; 2 eclipses, 1 sec. each; 1 eclipse, 5 sec.	White conical tower on concrete base.	1875 1923
			Storm warning signal shown east of light, daytime only.	
640	16,000 Rg e 140 200 mm e	Light 1 sec., eclipse 1 sec. Visible on range line only. Light 1 sec., eclipse 1 sec. Visible from 8° to 268°.	Black pyramidal tower, upstream face white, circular pier.	1908 1946
641	12,000 Rg e		Black conical tower, square pier.	1908 1928
642	140 200 mm e	75 flashes per minute.	Black. Spar station buoy.	
643	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
644	110 200 mm s	Flash 0.4 sec.	Black.	
645	30 200 mm a	Flash 0.4 sec.	Red.	
646	110 200 mm a	Flash 0.4 sec.	Black.	
647	30 200 mm a	Flash 0.4 sec.	Red.	
648	30 200 mm a	Flash 0.4 sec. BELL, on buoy.	Red. Spar station buoy.	
649	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
650	3,000 375 mm e	Flash 1.5 sec., eclipse 3.5 sec. HORN, diaphragm, air; blast 2 sec., silent 18 sec.	White square tower on cylindrical base.	1941

## LAKE ST. CLAIR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE ST. CLAIR</b>					
651	Lake St. Clair Lighted Buoy 28. Fl. R., 4 sec.	In 25 feet, at angle in channel.		11	7
652	Lake St. Clair Lighted Buoy 29. Fl. W., 4 sec.	In 24 feet.....		10	-----
653	Lake St. Clair Lighted Buoy 30. Fl. R., 4 sec.	In 24 feet.....		10	-----
654	Lake St. Clair Lighted Buoy 33. Fl. W., 4 sec.	In 24 feet.....		10	9
655	Lake St. Clair Lighted Buoy 34. Fl. R., 4 sec. (For St. Clair River, see No. 630.)	In 24 feet.....		10	7
656	ST. CLAIR FLATS OLD CHANNEL. U. Fl. W., 4 sec.	At head of old channel..... 42 32.2                      82 41.6		28	7
656.3	GROSSE POINTE CLUB DOCK SOUTH. F. G. U.	12,900 feet 45° from Windmill Point Light.		15	-----
656.4	GROSSE POINTE CLUB DOCK NORTH. F. G. U.	-----		15	-----
656.5	CRESCENT SAIL YACHT CLUB. F. G. U.	At Grosse Pointe Farms.....		58	-----
657	Grosse Pointe Farms Intake Crib Lighted Buoy. Fl. W., 4 sec.	In 15 feet, 50 feet southerly of crib.		10	-----
658	GROSSE POINTE YACHT CLUB. Occ. G., 2 sec. U.	On yacht club wharf.....		65	15
659	MARTIN DRAIN OUTER. F. W. U.	On outer end of drain..... 42 28.9                      82 52.7		8	9
660	MARTIN DRAIN INNER. F. W. U.	450 feet from outer light.....		8	9
661	Point Huron Lighted Buoy 1. Fl. W., 4 sec.	In 10 feet.....		6	8
662	SELFRIDGE FIELD AVIATION. Fl. W., 10 sec. U.	At Selfridge Field, 13 miles 18° from Windmill Point Light. 42 36.5                      82 49.1		-----	-----
663	Clinton River Lighted Buoy 3. Fl. W., 4 sec.	In 9 feet.....		6	8
664	Clinton River Entrance Lighted Buoy 5. Fl. G., 4 sec.	In 8 feet.....		6	6
665	CLINTON RIVER OUTER. Sp. Fl. R., 10 sec. 2 flashes. U.	In 1 foot on channel bank..... 42 35.7                      82 46.3		10	9
666	CLINTON RIVER INNER. Occ. R., 10 sec. U.	On point at river entrance. 1,180 feet 273° from preceding.		25	12

## MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
651	30 200 mm e	Flash 0.4 sec.....	Feet Red.	Year -----
652	110 200 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
653	30 200 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
654	110 200 mm a	Flash 0.4 sec.....	Black.	-----
655	30 200 mm a	Flash 0.4 sec.....	Red.	-----
656	30 150 mm a	Flash 0.4 sec.....	Yellow tower on crib.	1859 1915
656.3	75 mm e	} Maintained by Grosse Pointe Club, Grosse Pointe Farms, Mich.	-----	1948
656.4	75 mm e		-----	-----
656.5	400 200 mm e	Maintained by Crescent Sail Yacht Club, Grosse Pointe, Mich.	-----	1947
657	30 150 mm a	Flash 0.4 sec. Maintained by City of Highland Park, Mich.	Red and black horizontal bands.	Spar station buoy.
658	700 200 mm e	Light 1 sec., eclipse 1 sec..... Maintained by Grosse Pointe Yacht Club.	Square daymark on skeleton tower.	1935 1939
659	100 e	} Maintained by Macomb County Drain Commission.	Storm warning signals shown daytime only on clubhouse of Crescent Sail Yacht Club.	-----
660	100 e		Pipe post.	1944
661	80 150 mm e	Flash 0.4 sec.....	Black.	Spar station buoy.
662	2,000,000 Rf e	Maintained by U. S. Air Force Base, Selfridge Field, Mich.	-----	-----
663	80 150 mm e	Flash 0.4 sec.....	Black.	Spar station buoy.
664	20 160 mm e	Flash 0.4 sec.....	Black.	-----
665	300 200 mm e	Flash 2 sec., eclipse 1 sec., flash 2 sec., eclipse 5 sec.	White daymark on white pile dolphin.	1935 1940
666	300 200 mm e	Light 5 sec., eclipse 5 sec.....	White daymark on white skeleton tower.	1908 1937
666	-----	-----	Storm warning signals shown daytime only at mouth of Clinton River.	-----

## LAKE ST. CLAIR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE ST. CLAIR</b>					
660.3	SELFRIDGE FIELD SOUTHEAST BREAKWATER. U. Occ. R., 2 sec.	42 36.6	82 48.8	12	-----
666.5	SELFRIDGE FIELD CENTER BREAKWATER. U. F. R.	42 36.7	82 48.8	5	-----
666.7	SELFRIDGE FIELD NORTH- WEST BREAKWATER. U. Occ. R., 2 sec.	42 36.7	82 48.9	12	-----
667	SELFRIDGE FIELD RANGE FRONT. U. F. G.	On shore	-----	12	-----
668	SELFRIDGE FIELD RANGE REAR. U. F. G.	42 38.9	82 49.2	21	-----
669	BELLE RIVER.----- Fl. W. U.	Outer end of east breakwater.	-----	22	10
670	Thames River Lighted Buoy... Fl. W.	42 18.0	82 42.6	-----	-----
672	THAMES RIVER RANGE FRONT. F. W.	In 14 feet, on north side or outer end of dredged cut. C.	-----	22	10
673	THAMES RIVER RANGE REAR. F. W.	On south shore, mouth of river. C.	-----	55	14
674	MITCHELL BAY RANGE FRONT. F. R.	300 feet 147° from front light. C.	-----	21	10
675	MITCHELL BAY RANGE REAR. F. R.	On inner end of wharf. C.	-----	30	10
676	MITCHELL BAY SHORE RANGE FRONT. F. W.	215 feet 45° from front light. C.	-----	19	2
677	MITCHELL BAY SHORE RANGE REAR. F. W.	42 28.3	82 24.7	28	2
678	MARTIN ISLAND RANGE FRONT. Fl. W.	190 feet 108° from front light. C.	-----	28	10
679	MARTIN ISLAND RANGE REAR. F. W.	On east end of island.-----C.	-----	36	10
<b>ST. CLAIR RIVER</b>					
680	ST. CLAIR FLATS CANAL 2... Fl. R., 4 sec. U.	270 feet 8° from front light. C.	-----	30	-----
681	St. Clair Flats Canal Lighted Buoy 1. Fl. G., 4 sec.	42 31.1	82 41.2	10	6
682	St. Clair Flats Canal Lighted Buoy 5. Fl. G., 4 sec.	In 25 feet.-----	-----	10	6

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Buoy
666.3	e	Light 1 sec., eclipse 1 sec. Maintained by U. S. Air Force Base, Mt. Clemens, Mich.	Feet	Year 1948
666.5	e	Maintained by U. S. Air Force Base, Mt. Clemens, Mich.		1948
666.7	e	Light 1 sec., eclipse 1 sec. Maintained by U. S. Air Force Base, Mt. Clemens, Mich.		1948
667	100 e	Shown only when Selfridge Field crash boats are out on patrol. Maintained by U. S. Air Force Base, Selfridge Field, Mich.	Orange triangular daymark, apex up, with black border.	1946
668	100 e		Orange triangular daymark, apex down, with black border.	1946
669	-----		On pole.	1938
670	-----		Black.	
672	-----		Red skeleton tower. 23	1845
673	-----		Red lantern on white circular tower. 59	1837
674	-----		White mast, shed alongside. 20	1912
675	-----		White mast. 28	1912
676	-----	Range guides through cut to intersection of Mitchell Bay Wharf Range.	White diamond daymark on pole.	1927
677	-----		White diamond daymark on pole.	1927
678	e	Range marks channel to Chenal Ecarte.	White diamond daymark on pole. 33	1914 1945
679	e	-----	White diamond daymark on pole. 40	1914 1945
680	30 200 mm a	Flash 0.4 sec.-----	Red, cylindrical tower on pier.	1913 1921
681	20 200 mm a	Flash 0.4 sec.-----	Black.	
682	20 200 mm a	Flash 0.4 sec.-----	Black.	



## ST. CLAIR RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ST. CLAIR RIVER</b>					
683	ST. CLAIR FLATS CANAL 4----- Fl. R., 4 sec. U.	3,600 feet 41° from St. Clair Flats Canal Light 2. 42 31.6 82 40.7		Feet 35	
684	St. Clair Flats Canal Lighted Buoy 9. Fl. G., 4 sec. U.	In 25 feet-----		9	6
685	ST. CLAIR FLATS CANAL 6----- Fl. R., 4 sec. U.	On upper end of dike, 7,200 feet 41° from St. Clair Flats Canal Light 2.		35	
686	St. Clair Flats Lighted Buoy 8. Fl. R., 4 sec. U.	In 24 feet, marks edge of channel.		8	
687	ST. CLAIR FLATS RANGE FRONT. F. G. F. G.	On shore----- 42 33.0 82 39.1		48 28	14
688	ST. CLAIR FLATS RANGE REAR. F. G.	4,000 feet 41° from front light.		108	19
689	MAYBURY HIGHWAY 12----- Fl. E., U.	On south side of channel. C. 42 33.3 82 38.3		18	
690	ST. CLAIR FLATS 13----- F. G. U.	On northeast corner of hotel dock. 42 33.5 82 38.1		26	
691	ST. CLAIR FLATS 17----- F. G. U.	On north shore-----		26	
692	South Channel Lighted Buoy 19. Fl. G., 4 sec. U.	In 28 feet, marks edge of channel.		10	
693	SOUTHEAST BEND 18----- Fl. E., 6 sec. U.	Opposite Joe Bedore dock. C.		23	
694	SOUTHEAST BEND 20----- Fl. R., 8 sec. U.	At entrance to Little Bassett Channel. C.		23	
695	HARSENS ISLAND 21----- F. G. U.	Near north shore-----		27	
696	HARSENS ISLAND 25----- F. G. U.	On north bank-----		26	
697	SOUTHEAST BEND 26----- Fl. R., 10 sec. U.	Opposite preceding. C.		23	
698	HARSENS ISLAND 27----- F. G. U.	On north bank-----		26	
699	SOUTHEAST BEND 30----- Fl. E., 10 sec. U.	Below and inside line of re- mains of Canada Club Wharf. C.		20	
700	SOUTHEAST BEND 36----- Fl. E., 10 sec. U.	3,000 feet south of Harsens Island Range Front Light. C.		23	
701	HARSENS ISLAND RANGE FRONT. F. G. U.	In 8 feet near shore, below island. 42 34.3 82 34.6		27	
702	HARSENS ISLAND RANGE REAR. F. G. U.	525 feet 23½° from front light.		31	

## CANADA AND MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
683	30 200 mm a	Flash 0.4 sec.-----	Feet Red skeleton tower.	Year 1934 1935
684	20 200 mm a	Flash 0.4 sec.-----	Black.	
685	30 200 mm a	Flash 0.4 sec.-----	Red skeleton tower.	1934 1935
686	30	Flash 0.4 sec.-----	Red.	
687	200 mm a 60,000 Rf e	Visible on range line only. Light displayed continu- ously. Visible from 230° to 30°.	White daymark on skeleton tower. 40	1935
688	150 120,000 Rf e	Visible on range line only. Light displayed continu- ously.	Telephone and radiotele- phone at this station. White daymark on pyrami- dal tower visible above foli- age. 100	1859 1934 1935
689			White pyramidal concrete tower.	1928 1934
690	150 150 mm e		White daymark on mast on piles.	1859 1934
691	150 150 mm e		White cylindrical tower.	1889 1935
692	20 200 mm a	Flash 0.4 sec.-----	Black.	
693			White pyramidal concrete tower.	1913 1931
694			White pyramidal concrete tower.	1913 1931
695	150 150 mm e		White cylindrical tower.	1889 1934
696	150 150 mm e		White cylindrical tower.	1889 1935
697			White concrete tower.	1912 1931
698	150 150 mm e		White diamond daymark on black latticed mast.	1889 1927
699			White superstructure on pile cluster.	1913 1944
700			White concrete tower.	1912 1931
701	150 150 mm e		White cylindrical tower.	1889 1934
702	150 150 mm e		White daymark on skel- eton tower.	1889 1913

## ST. CLAIR RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ST. CLAIR RIVER</b>					
703	GRANDE POINTE 37 F. G. U.	In 1 foot, near shore, 0.6 mile southwesterly from Grande Pointe dock.		Feet 28	
704	SQUIRREL ISLAND 38 Fl. R. U.	Near north end of island. C.		18	
705	RUSSELL ISLAND LOWER RANGE FRONT. F. G. U.	In 1 foot, near shore.		18	
706	RUSSELL ISLAND MIDDLE RANGE REAR. F. W. and F. G. U.	In 1 foot, 2,000 feet 42° from front light. 42 38.6 82 31.4		33	
707	RUSSELL ISLAND 41 F. G. U.	In 2 feet, 1,500 feet 27° from preceding.		18	
708	WALPOLE ISLAND LOWER 40 Fl. R. U.	In 4 feet, off northwest corner of Government Wharf. C.		18	
709	WALPOLE ISLAND UPPER 42 Fl. R. U.	In 5 feet, on east side of chan- nel. C.		23	
710	Russell Island Shoal Lighted Buoy. I. Qk. Fl. W.	In 24 feet, on west side of cut at north end of shoal.		10	
711	Chenal Ecarté Shoal Lighted Buoy 42A. Fl. R., 4 sec.	In 24 feet, marks edge of shoal forming on bank at entrance to Chenal Ecarté.		10	
712	CHENAL ECARTÉ RANGE FRONT. F. W.	On Walpole Island, 750 feet southeast of north end. C.		10	1
713	CHENAL ECARTÉ RANGE REAR. F. W.	200 feet 133½° from front light. C.		25	1
714	WILLOW POINT F. G. U.	On west bank of river. 42 38.6 82 30.7		31	
715	Roberts Landing Lighted Buoy 43. Fl. W., 4 sec.	In 24 feet, 9,100 feet 192° from Marine City Salt Dock.		10	
716	Woodtick Island Lighted Buoy 44. Fl. R., 4 sec.	In 24 feet, on west side of shoal off south end of Wood- tick Island.		10	7
717	MARINE CITY SALT DOCK F. G. U.	On west bank, south of Marine City.		20	
718	Marine City Shoal Lighted Buoy 48. Fl. R., 4 sec.	In 24 feet.		10	
7185	STOKES POINT WHARF F. B. U.	20 feet shoreward from south- east corner of wharf. C. 42 42.7 82 28.9		30	
719	RECORDS POINT F. G. U.	On west side of river. 42 45.8 82 28.2		30	
720	HARTS LANDING F. G. U.	On northeasterly corner of boat house.		28	
721	COURTRIGHT Fl. R. U.	A mile below Courtright, On- tario. C. 42 48.5 82 28.7		20	4

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
703	150 150 mm e		Feet White diamond daymark on mast.	Year 1888 1924
704			White concrete tower.	1923 1931
705	150 150 mm e		White diamond daymark on latticed mast.	1889 1929
706	W. 500 G. 150 150 mm e	White in range with light No. 21 and from all points of approach excepting from northward. Green from 177° to 237°.	White square daymark on skeleton mast.	1889 1913
707	150 150 mm e		White lamp house and post on concrete pier.	1889 1920
708			White concrete tower.	1920 1931
709			White concrete tower.	1920 1931
710	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands. Spar station buoy.	
711	30 200 mm e	Flash 0.4 sec.	Red.	
712			White daymark with black stripe down center.	1009 1943
713			White daymark with black stripe down center; white shed alongside.	1009 28 1943
714	200 150 mm e		White rectangular daymark on skeleton tower.	1945
715	110 200 mm a	Flash 0.4 sec.	Black.	
716	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
717	150 150 mm e		White skeleton tower.	1931
718	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
7185	e		Pole.	1947
719	150 150 mm e		Black cylindrical tank on concrete pier.	1913
720	150 150 mm e		Mast.	1930
721			White superstructure on dol- phin.	1944

## ST. CLAIR RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ST. CLAIR RIVER</b>					
722	<i>St. Clair Middle Ground Lower Lighted Buoy.</i> I. Qk. Fl. W.			<i>Fed</i> 10	
		In 24 feet, south end of shoal, 10,900 feet 351° from Harts Landing Light.			
723	<i>St. Clair Middle Ground Lighted Buoy 49.</i> Fl. G., 4 sec.			10	
		In 22 feet, on northeast edge of shoal.			
724	<i>St. Clair Middle Ground Lighted Buoy 50.</i> Qk. Fl. R.			10	
		In 24 feet 15,800 feet 355½° from Harts Landing Light.			
725	MOORE F. Amber			30	
		25 feet shoreward of north-westerly corner of wharf at Moore, Ont. C.			
726	<i>St. Clair Middle Ground Upper Lighted Buoy.</i> I. Qk. Fl. W.			10	
		In 24 feet, at north end of shoal, 20,800 feet 3° from Harts Landing Light.			
727	<i>Stag Island Lower Lighted Buoy 51.</i> Fl. G., 4 sec.			10	
		In 23 feet, on west bank, at turn.			
728	STAG ISLAND SHOAL Fl. W.			20	4
		In water, on south end of shoal. U. C.			
729	CORUNNA RANGE FRONT F. R.				2
		Offshore. C.			
730	CORUNNA RANGE REAR F. R.			50	2
		230 feet 167°15' from front light. C.			
731	STAG ISLAND F. G.			25	
		On northeast corner of wharf on east side of island. C.			
732	STAG ISLAND MIDDLE F. G.			18	
		On west bank. U.			
733	<i>Stag Island Upper Lighted Buoy.</i> I. Qk. Fl. W.			10	
		In 24 feet, at north end of shoal.			
734	STAG ISLAND UPPER Fl. G., 2.5 sec.			26	
		On north end of Marysville dock. U.			
734.5	BLACK RIVER ENTRANCE Occ. E., 10 sec.			18	
		On north bank of Black River at mouth. U. C.			
			42 58.4	82	25.2
735	<i>Port Huron Traffic Lighted Buoy.</i> S-L. Fl. W.			10	
		In 22 feet, between up- and down-bound channels.			
736	SARNIA ELEVATOR Fl. R.			8	1
		On outer pile cluster on south side of entrance to Sarnia Elevator Dock. C.			
737	BAY POINT Fl. R., 3 sec.			24	
		On south end of point, Sarnia. C.			

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Luminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
722	140 200 mm e	Flashes interrupted by eclipse.	<i>Fed</i> Red and black horizontal bands.	<i>Year</i> Spar station buoy.
723	20 200 mm a	Flash 0.4 sec.	Black.	
724	30 200 mm a	75 flashes per minute.	Red.	Spar station buoy.
725			Pole.	1942 1944
726	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands.	Spar station buoy.
727	20 200 mm a	Flash 0.4 sec.	Black.	Spar station buoy.
728			White, square, wood; on concrete pier.	1900 1929
729			Pole, white diamond daymark	1890 1941
730			White, square, wood.	1890
731			Pole.	1942
732	150 150 mm e		White post on concrete block.	1908 1910
733	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands.	Spar station buoy.
734	150 150 mm e	Flash 0.5 sec.	White diamond daymark on black latticed mast.	1908 1927 1947
734.5	1,500 420 mm e	Light 5 sec., eclipse 5 sec. BELL, electric; synchronized with light to sound for 5 sec., silent 5 sec. Maintained by Blue Water Ferry Co., Port Huron, Mich., and operated only while ferries are underway.		
735	140 200 mm e	A short flash and a long flash.	Black and white vertical stripes.	
736			Pile cluster.	1943
737		Flash 0.5 sec.	Square skeleton tower, white shed at base.	1914 1942

## ST. CLAIR RIVER AND LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ST. CLAIR RIVER</b>					
738	FORT GRATIOT RANGE FRONT. F. G. U. F. G.	On west side of river, Port Huron. Port Huron-Sarnia Bridge center span lights (Occ. G.) are on Fort Gratiot Range line.		Feet 43 44	14 -----
739	FORT GRATIOT RANGE REAR. F. G. U.	635 feet 207¼° from front light.		64	16
740	POINT EDWARD RANGE FRONT. F. E.	On beach, near head of St. Clair River.		35	8
741	POINT EDWARD RANGE REAR. F. E.	2,266 feet 180¼° from front light.		120	14
<b>LAKE HURON</b>					
<b>WEST SIDE</b>					
742	Fort Gratiot Fl. G., 15 sec. Fog Light. F. Amber.	On mainland, north entrance to St. Clair River.		82	17
		48 00.4	82 26.3		
743	Fort Gratiot Lighted Buoy 1 Qk. Fl. W.	In 24 feet		10	-----
744	Lake Huron Cut Lighted Buoy 2 Fl. R., 4 sec.	In 30 feet, 50 feet south of Fort Gratiot Range line at turn in channel.		10	-----
745	Lake Huron Cut Lighted Buoy 3 Fl. W., 4 sec.	In 24 feet		13	-----
746	Lake Huron Cut Lighted Buoy 4 Fl. R., 4 sec.	In 24 feet		13	-----
747	Lake Huron Cut Lighted Buoy 5 Fl. W., 4 sec.	In 25 feet		10	-----
748	Lake Huron Cut Lighted Buoy 6 Fl. R., 4 sec.	In 25 feet		10	7

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
738	19,000 Rf e 150 150 mm e	Range lights are displayed continuously. Visible from 223° to 43°.	Feet 39	Year 1891 1916
739	19,000 Rf e	-----	White elliptical daymark on skeleton tower.	1891 1899
740	-----	Visible from all points of approach.	White, square, wood.	1903 1927
741	-----	Visible on range line only. Radio station; call VBE.	Yellow daymark with black vertical stripe, surmounted by yellow diamond shaped extension on bridge.	1903 1939
742	150,000 Rf e  200,000 Rg e	Flash 0.5 sec., eclipse 14.5 sec.  FOG LIGHT, fixed amber, shown in a 4° direction toward Lake Huron Lightship only when foggy in river. HORN, diaphragm, ohms, electric only when foggy in river as seen from this station, Port Huron coal dock, or Marysville waterworks. Group of 2 blasts every 30 sec., blast 2 sec., silent 1 sec., blast 2 sec., silent 25 sec. Diaphone, air, with same characteristic, if horn is disabled.	White conical tower, brick. 86  Telephone and radiotelephone at Port Huron Lifeboat station. Station will give available information on fog conditions in upper river by radiophone when requested. (2182 kc.)  Storm warning signals shown daytime only at Port Huron Coal Dock and at Port Huron Coast Guard Station.	1826 1861
743	140 200 mm e	75 flashes per minute	Black. Spar station buoy.	
744	30 200 mm e	Flash 0.4 sec.	Red. Spar station buoy.	
745	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
746	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
747	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
748	30 200 mm e	Flash 0.4 sec.	Red. Spar station buoy.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
749	<b>LAKE HURON LIGHTSHIP</b> Gp. Fl. W., 10 sec. 2 flashes. Radiobeacon. Distance-Finding Station.	In 25 feet, south end of lake, 650 feet west of Point Ed- ward Range line. 43 03.8	82 25.1	Feet 44	14
750	<i>Lake Huron Cut Lighted Buoy</i> 8. Fl. R., 4 sec.	In 26 feet.....		10	7
751	Port Sanilao..... Gp. Fl. W., 10 sec. 3 flashes.	In village..... 43 25.8	82 32.4	69	16
752	Harbor Beach..... Alt. Fl. W. and R., 10 sec. Radiobeacon. Distance-Finding Station.	On north side of entrance.... 43 50.7	82 37.9	54	15
753	HARBOR BEACH SOUTH PIER.. Fl. W., 4 sec. U.	On south side of entrance....		27	11
754	Pointe aux Barques Lighted Bell Buoy 1. Fl. W., 6 sec.	In 36 feet, 2.3 miles 58° from Pointe aux Barques Light- house. 44 02.9	82 59.7	11	9
755	Pointe aux Barques..... Fl. W., 10 sec. U.	On point, 14 1/2 miles 328 1/2° from Harbor Beach Light Station. 44 01.4	82 47.6	93	18
<b>SAGINAW BAY</b>					
756	PORT AUSTIN REEF..... Fl. R., 10 sec. U.	On south side of entrance.... 44 05.0	82 59.0	76	12
757	Port Austin Marker Radio- beacon.	On shore at Port Austin, Mich., 13,000 feet 193° from Port Austin Reef Light. 44 02.9	82 59.7		
758	ALABASTER TRAMWAY RANGE FRONT. U. F. R.	On crib near outer end of tramway. 44 11.5	82 31.7	20	
759	ALABASTER TRAMWAY RANGE REAR. U. F. R.	170 feet 270° from front light, on high crib near outer end of tramway.		70	
760	Charity Island Shoal Lighted Bell Buoy 6. Fl. W., 6 sec.	In 52 feet, off north end of shoal, easterly of White- stone Point.		13	10

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Peg signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
749	13,000 375 mm e	Flash 1 sec., eclipse 2 sec., flash 1 sec., eclipse 6 sec. Light displayed 1 hour be- fore sunset until 1 hour after sunrise and at other times when sound signal is in operation. F. W. rid- ing light, 250 c. p., 20 feet above water. DIAPHONE, two-tone, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 304 kc, groups of 3 dashes (--- --- ---). Flash 0.4 sec.-----	Feet Black hull, "HURON" on sides; black cylindrical lan- tern on black mast. 1893 1936	Year
750	30 200 mm e	Flash 0.4 sec.-----	Code flag signal NMGS, Station buoy, 2d. cl. can(s). Radiotelephone at this sta- tion.	
751	18,000 4 a	3 flashes, 1 sec. each; 2 eclipses, 1 sec. each; 1 eclipse, 5 sec.	DISTANCE-FINDING STA- TION. For method of op- eration, see p. 11. Red. Spar station buoy.	
752	W. 80,000 R. 25,000 4 e	White flash 1 sec., eclipse 4 sec., red flash 1 sec., eclipse 4 sec. DIAPHONE, air; blast 5 sec. silent 25 sec. RADIOBEACON: Transmits on 304 kc, groups of 2 dots, 1 dash (• • ---). Antenna lead-in at light tower.	White octagonal tower. 1886 59	1888
753	250 300 mm a	Flash 0.4 sec.-----	White conical tower. 1858 Telephone and radiotele- phone via Coast Guard Station. Storm warning signals shown at Coast Guard Station.	1858
754	110 200 mm a	Flash 1 sec.----- BELL, on buoy.	DISTANCE-FINDING STA- TION. For method of op- eration, see p. 11.	1912
755	120,000 3 e	Flash 3 sec., eclipse 7 sec.---	Black skeleton tripod. 1885 1912	1885
756	300 300 mm e	Flash 1 sec., eclipse 9 sec.---	White conical tower, dwell- ing attached. 1847 59 1908	1847
757		RADIOBEACON: Transmits on 312 kc, a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Range maintained by U. S. Gypsum Co.	Buff square tower, house attached. 1878 1901 1942	1878
758	200 e			1929
759	200 e			1929
760	140 200 mm e	Flash 1 sec.----- BELL, on buoy.	Black. Spar station buoy.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SAGINAW BAY</b>					
761	Charity Island West Shoal Lighted Buoy 7. Fl. G., 4 sec.	In 22 feet, on westerly edge of shoal.		Feet 10	8
762	GRAVELLY SHOAL..... Fl. W., 5 sec. U. Fl. W., 3 sec. Marker Radiobeacon.	In 22 feet, on end of shoal..... 44 01.2                      83 32.3		75 75	16 10
763	Saginaw Bay Traffic Lighted Bell Buoy. S-L. Fl. W.	In 22 feet.....		13	10
764	Saginaw Bay Channel Lighted Buoy 8. Fl. G., 4 sec.	In 18 feet.....		10	
765	Saginaw Bay Channel Lighted Buoy 4. Fl. R., 4 sec.	In 18 feet.....		10	7
766	Saginaw Bay Channel Lighted Buoy 11. Fl. G., 4 sec.	In 18 feet.....		10	
767	Saginaw Bay Channel Lighted Buoy 12. Fl. R., 4 sec.	In 18 feet.....		10	
768	Saginaw Bay Channel Lighted Buoy 13. Fl. G., 4 sec.	In 18 feet.....		10	
769	Saginaw Bay Channel Lighted Buoy 20. Fl. R., 4 sec.	In 18 feet.....		10	
770	SAGINAW RIVER RANGE FRONT. F. R. F. R.	On west side of river..... 43 38.5                      83° 51.0		30	13
771	SAGINAW RIVER RANGE REAR F. R.	2,330 feet 134° from front light.		61	15
772	ESSEXVILLE RANGE FRONT... F. G. U.	North of Essexville.....		32	
773	ESSEXVILLE RANGE REAR... F. G. U.	1,060 feet 159° from front light.		45	
774	Saginaw Bay Channel Lighted Buoy 25. Fl. R., 4 sec.	In 16 feet.....		10	

## MICHIGAN

No.	Candlepower Apparatus Fluorine	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt Year
761	20 200 mm a	Flash 0.4 sec.....	Feet Black. Can station buoy.	Year 1839
762	15,000 375 mm e 110 200 mm a	Flash 1 sec..... Standby light flash 0.5 sec. in continuous operation all year. DIAPHONE, two-tone, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 296 kc. a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	White square tower on cylin- drical base.	1839
763	200 300 mm a	A short flash and a long flash. BELL, on buoy, sounds con- tinuously. (CO <sub>2</sub> ). Radar Reflector.	Black and white vertical stripes. Can station buoy.	
764	20 200 mm a	Flash 0.4 sec.....	Black. Can station buoy.	
765	30 200 mm a	Flash 0.4 sec.....	Red. Nun station buoy.	
766	20 200 mm a	Flash 0.4 sec.....	Black. Can station buoy.	
767	30 200 mm a	Flash 0.4 sec.....	Red. Nun station buoy.	
768	20 200 mm a	Flash 0.4 sec.....	Black. Can station buoy.	
769	30 200 mm a	Flash 0.4 sec.....	Red. Nun station buoy.	
770	45,000 Rf e 500 300 mm e	Visible on range line only... Range lights are displayed continuously. Obscured from 101° to 239°.	Red elliptical daymark, with white vertical stripe, on black skeleton tower. 1876 1916	
771	45,000 Rf e 30 200 mm a	Visible on range line only...	Buff square tower in corner of square dwelling. 1876 1911 Telephone and radio tele- phone at this station. Storm warning signals shown on east side of river oppo- site range lights.	1876 1911
772	25,000 Rf e		White daymark on black skeleton tower. 1931	1931
773	25,000 Rf e		White daymark on black skeleton tower 1931	1931
774	30 200 mm a	Flash 0.4 sec.....	Red. Nun station buoy.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SAGINAW BAY</b>					
776	Saginaw Bay Channel Lighted Buoy 29. Fl. G., 4 sec.	In 21 feet, at bend in dredged channel.		Feet 10	
<b>SAGINAW RIVER</b>					
776	Saginaw River Lighted Buoy 37 Fl. G., 4 sec.	In 18 feet.....		10	
777	Saginaw River Lighted Buoy 40 Fl. R., 4 sec.	In 20 feet, on west side of river.		10	
778	Saginaw River Lighted Buoy 42. Fl. R., 4 sec.	In 18 feet, on northerly channel bank.		10	
779	Saginaw River Lighted Buoy 43. Fl. G., 4 sec.	In 20 feet, southerly side of channel.		10	
780	Saginaw River Lighted Buoy 49. Fl. G., 4 sec.	In 18 feet, on easterly side of channel.		10	
781	Saginaw River Lighted Buoy 56. Fl. R., 4 sec.	In 18 feet, on westerly side of channel.		10	
782	Saginaw River Lighted Buoy 67. Fl. G., 4 sec.	In 18 feet, on easterly channel bank.		10	
783	Saginaw River Lighted Buoy 60. Fl. R., 4 sec.	In 18 feet, on southerly side of channel.		10	
784	Saginaw River Lighted Buoy 62. Fl. R., 4 sec.	In 18 feet, on westerly channel bank.		10	
785	Saginaw River Lighted Buoy 84. Fl. R., 4 sec.	In 18 feet, on westerly side of channel.		10	
786	Saginaw River Lighted Buoy 67. Fl. G., 4 sec.	In 18 feet.....		10	
787	Saginaw River Lighted Buoy 70. Fl. R., 4 sec.	In 18 feet.....		10	
788	Saginaw River Lighted Buoy 76. Fl. R., 4 sec.	In 18 feet, on easterly channel bank.		10	
789	Saginaw River Lighted Buoy 85. Fl. G., 4 sec.	In 18 feet, on westerly channel bank.		10	
790	JAMES CLEMENTS AVIATION. Fl. W., 10 sec. U.	South of Bay City..... 43 33.4                      83 53.9			
<b>WEST SIDE</b>					
791	TAWAS..... Occ. W., R. sector, 30 sec.	On Tawas Point..... 44 15.2                      83 26.9		70	16

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
775	20 200 mm a	Flash 0.4 sec.....	Feet Black.	Year Can station buoy.
776	11 200 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
777	15 200 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
778	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
779	13 200 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
780	5 150 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
781	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
782	5 150 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
783	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
784	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
785	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
786	5 150 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
787	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
788	7 150 mm a	Flash 0.4 sec.....	Red.	Spar station buoy.
789	5 150 mm a	Flash 0.4 sec.....	Black.	Spar station buoy.
790	8,000,000 Rf e	Maintained by James Clements Airport Co. Operated only on request made before 6 P. M.		
791	W. 13,000 R. 4,000 4 e	Light 25 sec., eclipse 5 sec. Red from 45° to 135°. DIAPHONE, air; group of 2 blasts every 60 sec.; blast 4 sec., silent 16 sec.; blast 4 sec., silent 36 sec., 3,150 feet 232° from light.	White conical tower, dwelling attached. 71	1853 1876 Telephone and radiotelephone at lifeboat station. Storm warning signals shown at end of Tawas Point.

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
702	Tawas Point Lighted Buoy #1 Fl. R., 4 sec.	In 33 feet, on end of shoal		Feet 12	7
703	Au Sable Point Lighted Bell Buoy 1. Fl. W., 6 sec.	In 40 feet, outside shoal off point.		10	9
704	AU SABLE PIERHEAD F. R.	On side of north pier, mouth of Au Sable River. 44 24.4	83 19.3	34	13
705	Sturgeon Point Fl. W., 6 sec.	On easternmost point be- tween Saginaw and Thunder Bays. 44 42.7	83 16.3	69	16
706	Thunder Bay Traffic Lighted Bell Buoy. S-L. Fl. W.	In 70 feet. Marking point of departure of navigation courses at entrance to Thunder Bay.		10	9
707	ALPENA Occ. W., 2 sec. Marker Radiobeacon	On north side of entrance of Thunder Bay River. 45 03.8	83 25.4	42	14
708	HURON PORTLAND CEMENT Co.'s CHANNEL RANGE FRONT. F. R.	On north shore, Thunder Bay. 45 04.1	83 24.5	76	
709	HURON PORTLAND CEMENT Co.'s CHANNEL RANGE REAR. F. R.	700 feet 343° from front light.		109	
801	Alpena Junction Lighted Buoy. I. Qk. Fl. W.	In 21 feet, on west side of channel, at intersection with river channel.		10	9
802	Thunder Bay Quarries Junction Lighted Buoy. I. Qk. Fl. W.	In 21 feet		10	
803	THUNDER BAY QUARRIES RANGE FRONT. F. G.	3,100 feet 30° from Alpena Light.		22	
804	THUNDER BAY QUARRIES RANGE REAR. F. G.	400 feet 358° from front light.		38	
805	Thunder Bay Island Fl. W., 15 sec. Radiobeacon. Distance-Finding Station.	On east shore of island. 45 02.2	83 11.7	63	16

## MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
702	30	Flash 0.4 sec.	Feet Red.	Year Spar station buoy.
703	110 200 mm a	Flash 1 sec. BELL, on buoy.	Black.	Spar station buoy.
704	700 375 mm e		Red skeleton tower on con- crete pier.	1873 1912
705	34,000 3 1/4 e	Flash 2 sec., eclipse 4 sec.	Storm warning signals shown about 1 mile north of light. White conical tower, dwelling attached.	1870 71
706	140 200 mm e	A short flash and a long flash. BELL, on buoy.	Black and white vertical stripes. Can station buoy.	
707	17,000 4 e	Light 1 sec., eclipse 1 sec. HOEN, diaphragm, air; blast 1 sec., silent 14 sec. RADIOBEACON: Transmits on 308 kc., a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	Red skeleton tower, upper part inclosed, on concrete pier.	1877 1914
708	14,000 350 mm e	Maintained by Huron Port- land Cement Co.	White diamond daymark on skeleton tower.	1911 1947
709	14,000 350 mm e	Maintained by Huron Port- land Cement Co.	White diamond daymark on skeleton tower.	1911 1947
801	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands. Spar station buoy.	
802	140 200 mm e	Flashes interrupted by eclipse.	Red and black horizontal bands. Spar station buoy.	
803	4,500 Rf e	Range maintained by Al- pena Power Co., Alpena, Mich.	White diamond daymark on black skeleton tower.	1931
804	4,500 Rf e		White diamond daymark on black skeleton tower.	1931
805	60,000 4 e	Flash 3.4 sec., eclipse 11.6 sec. DIAPHONE, two-tone, air; group of 2 blasts every 30 sec.; blast 2 sec., silent 2 sec., blast 2 sec., silent 24 sec. RADIOBEACON: Transmits on 236 kc, groups of dash, dot, dash (— • —). Antenna lead-in 640 feet 181° from lighthouse.	Gray conical tower, dwelling attached.	1832 67
			Telephone and radiotele- phone via Coast Guard Station. Storm warning signals shown at southeast end of island. DISTANCE-FINDING STA- TION. For method of operation see p. 11.	



## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
806	Thunder Bay Island Shoal Lighted Bell Buoy 1. Fl. W., 4 sec.	In 22 feet, on northwesterly edge of shoal.		Feet 10	9
807	Middle Island..... Occ. G., 10 sec.	On east side of island..... 45 11.6                      83 19.3		78	17
808	Rockport Lighted Buoy 2..... Fl. R., 4 sec.	In 28 feet, on north side of channel entrance.		13	7
809	PRESQUE ISLE HARBOR RANGE FRONT. U. F. G.	On west shore of harbor..... 45 20.3                      83 29.4		19	-----
810	PRESQUE ISLE HARBOR RANGE REAR. U. F. G.	800 feet 274° from front light.		36	-----
811	Presque Isle..... F. W.	On north end of Presque Isle. 45 21.5                      83 29.5		123	20
812	Adams Point Lighted Buoy 1. Fl. W., 6 sec.	In 42 feet, north of point.....		10	-----
813	CALCITE BREAKWATER..... Occ. E., 4 sec.	On outer end of west break- water. U. 45 25.0                      83 46.4		49	14
814	CALCITE BASIN 1..... F. W. U.	In 17 feet.....		3	-----
815	CALCITE BASIN 3..... F. W. U.	In 17 feet.....		3	-----
816	CALCITE..... F. R. U.	At inner end of slip.....		191	-----
817	CALCITE INCOMING RANGE FRONT. U. F. R. U.	On south side of slip.....		72	10
818	CALCITE INCOMING RANGE REAR. U. F. R. U.	500 feet 236° from front light.		180	10
819	CALCITE OUTGOING RANGE FRONT. U. F. G. U.	Near midchannel.....		115	10
820	CALCITE OUTGOING RANGE REAR. U. F. G. U.	250 feet 236° from front light.		55	10
821	ROGERS CITY FOG SIGNAL.....	On west side of Fish Tug Slip. 45 25.5                      83 48.8		-----	-----
822	Forty-Mile Point..... Occ. W., 10 sec.	On mainland..... 45 29.2                      83 54.8		66	16

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
806	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Feet Black. Spar station buoy.	Year -----
807	9,000 3 e	Light 5 sec., eclipse 5 sec.... DIAPHONE, air; blast 2 sec., silent 18 sec.	Buff conical tower, dwelling detached. 1905	80
808	30 200 mm a	Flash 0.4 sec.....	Telephone at this station. Red. Spar station buoy.	-----
809	140 200 mm e	-----	White square tower. 1870	23
810	900 Rg e	Also serves as a leading light for entering North Bay.	White triangular daymark on white skeleton tower. 1870	33
811	26,000 3 e	DIAPHONE, air; group of 3 blasts every 30 sec.; 3 blasts 1½ sec. each, 2 si- lences 1 sec. each, 1 silence 24 sec.	White conical tower, dwelling attached. 1840	109
	5,000 3 e	Winter light, shows station characteristic.	Storm warning signals shown here. Telephone at this station.	1871
812	110 200 mm a	Flash 1 sec.....	Black.	-----
813	1,000 375 mm e	Light 2 sec., eclipse 2 sec.... WHISTLE, air; blast 2 sec., silent 18 sec.	White skeleton tower. 1928	1929
814	5 150 mm e	Maintained by Michigan Limestone & Chemical Co., from Apr. 15 to Dec. 15.	Black stake. 1942	-----
815	5 150 mm e	Maintained by Michigan Limestone & Chemical Co.	Black stake. 1942	-----
816	e	Maintained by Michigan Limestone & Chemical Co.	Neon light 8 feet in diameter, on screen house. 1930	-----
817	160 e	Maintained by Michigan Limestone & Chemical Co.	White diamond daymark on conveyor house. 1930	-----
818	150 e	Maintained by Michigan Limestone & Chemical Co.	-----	1930
819	120 e	Maintained by Michigan Limestone & Chemical Co.	Box on conveyor house. 1930	-----
820	120 e	Maintained by Michigan Limestone & Chemical Co.	Two lights, 10 feet apart hor- izontally. 1930	-----
821	-----	SIREN, electric; blast 10 sec., silent 10 sec. Maintained by Clarence H. Platz, Rogers City, Mich.	-----	1944
822	13,000 4 e	Light 5 sec., eclipse 5 sec.... DIAPHONE, two-tone, air; blast 3 sec., silent 27 sec.	White square brick tower on dwelling. 1897	53
			Telephone at this station.	1935

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH END</b>					
823	Spectacle Reef..... Alt. Fl. W. and R., 60 sec.	On west edge of reef..... 45 46.4                      84 08.2		Fed 88	17
<b>STRAITS OF MACKINAC</b>					
824	Cordwood Point Lighted Buoy 1..... Fl. G., 4 sec.	In 30 feet, 16,250 feet 107 1/4° from Poe Reef Light, on the northerly side of the shoal.		12	6
825	Poe Reef..... Gp. Fl. W., 10 sec. 2 flashes. Radiobeacon. Distance-Finding Station.	In 23 feet, on east end of reef, north side of channel. 45 41.7                      84 21.7		71	16
826	Fourteen Foot Shoal..... Fl. W., 3 sec.                      U.	In 14 feet..... 45 40.8                      84 26.1		51	14
827	CHEBOYGAN CRIB..... Fl. R., 2.5 sec.                      U.	On west side of dredged en- trance to Cheboygan River. 45 39.8                      84 27.6		37	12
828	CHEBOYGAN RIVER RANGE FRONT. F. R.	In city of Cheboygan, on river bank. 45 38.9                      84 28.3		45	14
829	CHEBOYGAN RIVER RANGE REAR. F. R.	1,115 feet 212 1/4° from front light.		75	16
830	Cheboygan Traffic Lighted Bell Buoy. S-L. Fl. W.	In 84 feet, south of Point aux Pins.		10	9
831	MACKINAW CITY FERRY FOG SIGNAL.	On end of M. C. R. R. dock.....			

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
823	W. 45,000 R. 35,000 2 e 110 200 mm a	White flash 10 sec., eclipse 20 sec., red flash 10 sec., eclipse 20 sec. Winter light, FL W., 5 sec., flash 0.5 sec. DIAPHONE, air; group of 2 blasts every 30 sec.; blast 2 sec., silent 2 sec., blast 2 sec., silent 24 sec.	Fed 88	Year 1874
824	20 200 mm a	Flash 0.4 sec.....		Black. Spar station buoy.
825	25,000 3 e 110 200 mm a	Flash 1 sec., eclipse 2 sec., flash 1 sec., eclipse 6 sec. Winter light, shows station characteristic. DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 302 kc, groups of 1 dot, 2 dashes (a --- ---). An- tenna lead-in at light tower.		White square tower on con- crete pier. 1929 Radiotelephone at this sta- tion. DISTANCE-FINDING STA- TION. For method of op- eration see p. 11.
826	11,000 4 e 110 200 mm a	Flash 1 sec., eclipse 2 sec..... Winter light, shows station characteristic. DIAPHONE, air; blast 1 sec., silent 14 sec.		White conical tower, square structure on concrete pier. 1930
827	300 4 a	Flash 0.5 sec. .... BELL, 1 stroke every 15 sec. (CO.)		White octagonal tower on crib. 1884 1910
828	10,000 Rf e			Red daymark with white vertical stripe on buff square tower on dwelling. 1880 51
829	10,000 Rf e			Telephone and radiotele- phone at this station. Red daymark with white vertical stripe on black skeleton tower. 1880 77 1900
830	110 200 mm a	A short flash and a long flash. BELL, on buoy.		Black and white vertical stripes. NOTE: Vessels are requested to leave buoy on port hand in passing.
831		HORN, diaphragm, air; 2 blasts every 30 sec., blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec. Horn points ENE. Maintained by Mackinac Transporta- tion Co.		1940

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
	<b>STRAITS OF MACKINAC</b>			<i>Fath</i>	
832	Old Mackinac Point..... Fl. W., 10 sec. Radiobeacon. Distance-Finding Station.	On point..... 45 47.3	84 43.8	62	15
833	South Graham Shoal Lighted Bell Buoy 1. Fl. W., 6 sec.	In 24 feet, on shoal.....		11	9
834	North Graham Shoal Lighted Gong Buoy 3. Fl. G., 4 sec.	In 30 feet, on east end of shoal.		10	6
835	ST. IGNACE FERRY..... Occ. R., 2 sec.	On end of D. S. S. and A. Ry. dock.		20	11
836	St. Ignace Marker Radio- beacon.	On northeast corner of Mich- igan State Ferry dock. 45 52.1	84 43.3		
837	Majors Shoal Lighted Buoy 2..... Fl. R., 4 sec.	In 20 feet, at west end of shoal.		10	7
838	MACKINAC COUNTY AIRPORT. Fl. W., 10 sec.	2 miles north of St. Ignace..... U. 45 53.0	84 44.8		
839	MACKINAC ISLAND..... F. G. U. Marker radiobeacon.	On southwest corner of Mack- inac Island. 45 51.5	84 38.8	18	11
840	Round Island Shoal Lighted Buoy 4. Fl. R., 4 sec.	In 27 feet, marks end of shoal northwesterly of Round Island.		10	7

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
832	140,000 4 e	Flash 2 sec., eclipse 8 sec. HORN, diaphragm, ohlme, air; group of 2 blasts every 60 sec.; blast 3 sec., silent 17 sec., blast 3 sec., silent 37 sec.	<i>Fath</i> Yellow cylindrical tower, dwelling attached. 1892 Telephone and radiotele- phone at this station. Storm warning signals for Lake Michigan only shown on point west of old city dock, Mackinaw City.	<i>Year</i> 1892
838	140 200 mm e	RADIOBEACON: Transmits on 314 kc, groups of 3 dashes (--- --- ---). An- tenna, lead-in 100 feet 56° from light tower. Flash 1 sec.....	Black. Can station buoy.	
834	20 200 mm a	BELL, on buoy. Radar Reflector. Flash 0.4 sec.....	Black. Can station buoy.	
835	300 e	GONG, on buoy. Light 1 sec., eclipse 1 sec. --- HORN, diaphragm, air; blast 2 sec., silent 18 sec. Horn points SSE. Maintained by Mackinac Transporta- tion Co.		1940 1946
836		RADIOBEACON: Transmits on 308 kc, two 5 sec. dashes every 30 sec.; dash 5 sec., silent 4.5 sec., dash 5 sec., silent 15.5 sec.; synchron- ized with Mackinac Island Marker Radiobeacon and will transmit when the lat- ter is silent. In event of failure of one signal unit, a 5-sec. dash, every 30 sec.		1938
837	30 200 mm a	Flash 0.4 sec.....	Red. Nun station buoy.	
838	1,000,000 Rf e	Flashing white around entire horizon. Maintained by Mackinac County.		
839	250 200 mm e	RADIOBEACON: Transmits on 310 kc, a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.; synchron- ized with St. Ignace Marker Radiobeacon and will transmit when the latter is silent. Antenna lead-in at light tower.	On white house.	1938
840	30 200 mm a	Flash 0.4 sec.....	Storm warning signals for Lake Huron only shown on west side of harbor near Coast Guard lookout tower.	
			Red. Spar station buoy.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>STRAITS OF MACKINAC</b>					
841	ROUND ISLAND..... Fl. B., 10 sec. U.	On northwest end of island... 45 50.2	84 37.0	53	7
842	Round Island Passage..... Occ. G., 10 sec. Radlabeacon. Distance-Finding Station.	In 26 feet, on north side of channel. 45 50.6	84 36.0	71	16
843	Mackinac Spit Lighted Gong Buoy 5. Fl. G., 4 sec.	In 27 feet, on end of spit.....		10	6
844	Round Island Lighted Buoy 6. Fl. B., 4 sec.	In 27 feet, at outer end of shoal, north of island.		11	7
845	COAL DOCK PIERHEAD..... F. W. U.	On outer end of pier.....		14	10
846	PASSENGER PIERHEAD..... F. B. U.	On outer end of pier.....		20	10
847	MACKINAC ISLAND EAST BREAKWATER. U.	On south end of breakwater..		21	7
848	Mission Point Lighted Bell Buoy 9. Qk. Fl. G.	In 36 feet, on edge of shoal making off point.		11	6
849	Bois Blanc..... Fl. W., 4 sec. U.	On point, east end of Bois Blanc Island. 45 43.7	84 25.3	42	10
<b>LAKE HURON, NORTH END</b>					
850	Brule Point Lighted Buoy 11.. Fl. W., 4 sec.	In 26 feet, end of shoal, west entrance to Les Cheneaux Islands.		10	9
851	Connere Point Lighted Buoy 1. Fl. W., 4 sec.	In 8 feet, at end of pier.....		5	-----
852	Penny Island Point Lighted Buoy 13. Fl. W., 4 sec.	In 26 feet, end of shoal off point, entrance to Soam- mons Harbor.		10	9
853	ISLE ISADORE..... Fl. W., 4 sec. U.	On south end of Island No. 8, Les Cheneaux Islands. 45 53.2	84 18.3	15	-----
854	Martin Reef..... Op. Fl. W., 10 sec. 3 flashes.	In 6 feet, on south end of reef. 45 54.8	84 08.9	65	16

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
841	30 200 mm a	Flash 1 sec.....	Feet White square tower on dwell- ing.	Year 1898
842	3,000 Solid bank of sealed beam lamps e	Light 5 sec., eclipse 5 sec.... HORN diaphragm, air; blast 3 sec., silent 27 sec. RADIOBEACON. Transmits on 302 kc, groups of 1 dash, 3 dots (mm • • •). An- tenna lead-in at light tower.	57 Octagonal white steel tower on square white concrete base.	1948 DISTANCE-FINDING STA- TION. For method of oper- ation, see p. 10. Telephone and radiotele- phone via Coast Guard Station.
843	20 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
844	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
845	350 150 mm e	Maintained from May 1 to Oct. 1, by Union Terminal Piers, Inc.	White mast.	1932
846	100 150 mm e	BELL, hand. Maintained from May 1 to Oct. 1, by Union Terminal Piers, Inc.	White mast.	1932
847	45 150 mm a	Flash 0.4 sec.....	White skeleton tower.	1941.
848	20 200 mm a	75 flashes per minute..... BELL on buoy.	Black. Spar station buoy.	
849	170 300 mm a	Flash 0.4 sec..... Visible from 281° to 131°.	White skeleton tower with tank house.	1839 1942
850	140 200 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
851	12 90 mm e	Flash 0.4 sec. Maintained from June 1 to Nov. 1.	Black.	
852	140 200 mm e	Flash 0.4 sec.....	Black. Spar station buoy	
853	30 90 mm e	Flash 0.4 sec. Maintained by Robert L. Hatch, from July to September.	White triangular tower.	1916
854	8,000 4 e 110 200 mm a	3 flashes, 1 sec. each, 2 eclipses 1 sec. each, 1 eclipse 5 sec. Winter light, shows station characteristic. DIAPHONE, air; blast 2 sec. silent 18 sec.	White square tower on con- crete pier.	1927
			Radiotelephone at this sta- tion.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	M.Das sec
		Latitude, N.	Longitude, W.		
<b>NORTH END</b>					
855	Detour Reef..... Fl. W., E. Sector, 10 sec. Radiobeacon. Distance-Finding Station.	In 24 feet, on outer end of reef, west side of entrance to St. Marys River. 45 57.0                      83 54.2		74	16
856	False Detour Passage Lighted Buoy 1. Fl. W., 4 sec.	In 30 feet, marks easterly side of shoal.		10	9
<b>EAST SIDE</b>					
856.3	Kettle Point Reef Lighted Buoy. Qk. Fl. E.	In 30 feet, 11,200 feet 310° off Kettle Point.                      C.		-----	-----
856.5	GRAND BEND HARBOR..... F. G.                      U.	On outer end of pier..... C. 43 18.8                      81 46.0		20	7
857	BAYFIELD WHARF..... F. E.                      U.	Near outer end of wharf... C. 43 34.3                      81 42.5		22	10
858	Goderich Main..... Gp. Fl. W., 25 sec. 2 flashes.	On bank, south side of en- trance to Goderich Harbor. C. 43 44.6                      81 43.6		150	21
859	GODERICH NORTH BREAK- WATER.                      U.	On west end of north break- water.                      C. 43 44.7                      81 44.2		25	12
860	GODERICH SOUTH BREAK- WATER.                      U.	43 44.7                      81 44.2		-----	-----
861	Goderich Radiobeacon.....	43 44.8                      81 43.9		-----	-----

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
855	100,000 3¼ e	Flash 1 sec., eclipse 9 sec., red from 79¼° to 189¼°. Light displayed one hour before sunset until one hour after sunrise and when sound signal is in opera- tion.	Feet	Year
	110 200 mm e	Winter light; Fl. W. 5 sec., flash 0.5 sec. DIAPHONE, air: When foggy in lake, but clear inside river, as seen from this sta- tion, groups of 3 blasts; 3 blasts 2 sec. each, every 60 sec. 2 silences 2 sec. each, 1 silence 50 sec. When fog- gy in both lake and river; as seen from this station blast 8 sec., silent 54 sec. RADIOBEACON: Transmits on 288 kc, groups of 4 dashes (-----). Antenna lead-in at light tower.	White square superstructure, square tower, on concrete pier. Telephone at this station.	1981
			Storm warning signals shown on Dawson Street, Detour.	
856	110 200 mm a	Flash 0.4 sec.-----	Black. Spar station buoy.	
856.3	e	-----	Red.	
856.5	a	-----	Steel lamp standard.	1948
857	-----	-----	Pole.	1929
			Storm warning signals shown on south bank overlooking Bayfield Harbor.	
858	25,000	Flash, eclipse 6 sec., flash, eclipse 19 sec.	White square stone, red lan- tern.	1847
			33	
			Storm signal station.	
859	-----	Flash 0.5 sec.----- DIAPHONE, air; blast 2 sec., silent 28 sec. Horn points 332¼°.	White square pyramidal con- crete structure.	1909 1914
860	-----	-----	Skeleton tower.	1945
861	-----	RADIOBEACON: Trans- mits on 298 kc., 3 groups dot, 2 dashes, dot (e-----e) followed by 1 long dash.		1945

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
862	GODERICH NORTH PIER RANGE FRONT. F. G.	On pier, 117 feet from outer end.		Feet 41	9
863	GODERICH NORTH PIER RANGE REAR. F. G.	On beach, 1,430 feet 89½° from front light.		65	10
864	Point Clark..... Op. Fl. W., 15 sec. 3 flashes.	On end of low point.....C. 44 04.4                   81 45.5		93	17
865	KINCARDINE RANGE FRONT.. F. E.	On north pier, 30 feet from west end.		35	8
866	Kincardine Range Rear..... Fl. W., 20 sec.	In town on hillside 1,305 feet 105° from front light.		80	16
867	PORT ELOIN RANGE FRONT.. F. G.	On wharf near north end...C. 44 26.7                   81 24.3		24	10
868	PORT ELOIN RANGE REAR.. F. G.	528 feet 108½° from front light.		40	13
869	Chantry Island..... F. W.	On east side of island, 2.5 miles west from Saugeen, C. 44 29.4                   81 24.2		94	18
870	SOUTHAMPTON HARBOR RANGE FRONT. Fl. W.	On east end of west break- water.		20	8
871	Southampton Harbor Range Rear. F. W.	On shore, 7,915 feet 178½° from front light.		31	12
872	SAUGEEN RANGE FRONT..... F. E.	On breakwater, 145 feet from its outer end, north side of mouth of Saugeen River. C. 44 30.1                   81 22.5		36	8
873	SAUGEEN RANGE REAR..... F. E.	On hill, 2,371 feet 96½° from front light.		61	8
874	Southampton Lighted Bell Buoy. Fl. E.	In 22 feet, off north end Chantry Island Bank. C.			
875	Loyal Island..... Op. Fl. W., 20 sec. 2 flashes.	On west side of island.....C. 44 57.1                   81 25.2		51	14
876	STOKES BAY RANGE FRONT.. F. W.	On northwest end of west- ernmost Knife Island. C. 44 58.0                   81 23.5		30	12
877	STOKES BAY RANGE REAR.... F. W.	On mainland, 4,250 feet 69° from front light.		61	15
878	Cove Island Lighted Whistle Buoy. Fl. W.	In 138 feet, 6 miles 274° from Cove Island Lighthouse. C.			
878. 5	LUCAS ISLAND..... Fl. W.	On north side of island.....C. 45 23.6                   81 46.1		38	

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
862			Feet Square tower, red open base, white upper part inclosed, red lantern.	Year 1841 1943
863		Lifeboat station on south pier.	White, square skeleton, up- per part inclosed, red lan- tern.	1905 1943
864	30,000	Flash, eclipse 2¼ sec., flash, eclipse 2¼ sec., flash, eclipse 10 sec.	White circular stone.	1869 1927
865		HORN, electric; blast 2 sec., silent 4 sec. Storm signal, east side of harbor basin.	White diamond daymark on pole.	1874 1931
866			White, octagonal, wood; dwelling attached; on stone pier.	1881 1925
867			Storm signal on east side of harbor.	
867			White diamond daymark on pole.	1935
868			White daymark on pole.	1935
869			White circular stone.	1859 86
870			Skeleton tower.	1877 1945
871		Storm-signal east of fog sig- nal, at corner of Lake and High Streets.	White, square, wood.	1877 1901
872		HORN, electric; 1 blast every 20 sec., blast 3-sec., silent 17 sec.	White, square, wood.	1883 1939
873			White, square, wood.	1903 31
874		BELL, on buoy	Red.	1939
875	25,000	Flash, eclipse 5 sec., flash, eclipse 15 sec.	White, square tower, dwell- ing attached, red lantern.	1885 57
876		Use range only with local knowledge.	White, square, wood.	1904 33
877			Brown square skeleton, white inclosed upper part.	1904 64
878		WHISTLE, on buoy	Black and white vertical stripes.	
878. 5		Visible from 40° to 229°	White diamond daymark on pole.	1949

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
879	O'Brien Patch Lighted Bell Buoy. Fl. G.	In 72 feet.....C. 45 20.5	81 46.6		
880	Cove Island..... Fl. W., 2.5 sec. Radiobeacon. Distance-Finding Station.	On north point of island, en- trance to Georgian Bay, C. 45 19.7	81 44.2	90	18
881	South Baymouth Lighted Bell Buoy. Fl. R.	7,500 feet 203½° from South Baymouth Range Front Light. C.			
882	SOUTH BAYMOUTH RANGE FRONT. F. G.	On southeast end of island, north side of mouth of bay, C. 45 38.5	82 00.8	28	12
883	SOUTH BAYMOUTH RANGE REAR. F. G.	On Manitoulin Island, 772 feet 24° from front light. C.		46	14
884	Providence Bay Lighted Bell Buoy. Fl. W.	On south edge of Simcoe Bank. C.			
885	PROVIDENCE BAY..... F. W.	On end of Providence Point, Manitoulin Island. C. 45 39.1	82 16.5	43	14
886	PROVIDENCE BAY WHARF..... F. R.	On outer end of wharf.....C. 45 39.5	82 16.1	28	11
887	Great Duck Island..... Gp. Fl. W., 15 sec. 3 flashes.	On southwest point of island.....C. 45 38.5	82 57.8	89	18
888	Mississagi Strait..... F. W.	On west side of Manitoulin Island. C. 45 53.6	83 13.5	46	14
<b>GEORGIAN BAY</b>					
889	TOBERMORY..... F. R.	On west side of entrance to harbor. C. 45 16.6	81 40.4	40	9
890	Flowerpot Island..... F. W.	On northeast point of island.....C. 45 18.5	81 36.8	88	17
891	Bears Rump Shoal Lighted Bell Buoy. Fl. W.	In 36 feet, off south end of Bears Rump Island. C.			
892	WINGFIELD BASIN RANGE FRONT. F. R.	On south side of basin.....C. 45 14.6	81 17.8		
893	WINGFIELD BASIN RANGE REAR. F. R.	150 feet 173° from front light. C.			

## CANADA

No.	Candlepower Apparatus Diluminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
879		BELL, on buoy.....	Feet Red and black horizontal bands.	Year 1859
880	30,000	DIAPHONE, air; group of 3 blasts every 60 sec.; 3 blasts 2 sec. each, 2 silences 3 sec. each, 1 silence 48 sec. RADIOBEACON: Transmits on 292 kc, groups of 1 dash, 2 dots (--- • •) followed by 2 long dashes.	White circular stone dwelling attached. 85	1859 1924
881		BELL, on buoy.....	DISTANCE-FINDING STA- TION. For method of oper- ation, see p. 11.	Red.
882		WHISTLE, air; blast 2.5 sec., silent 27.5 sec.	White, square, wood. 25	1898
883			White, square, wood. 40	1898
884		BELL, on buoy.....	Black.	
885		HORN, hand, answers signals.	White, octagonal, wood; red lantern. 42	1904
886			Lantern on pole.	1931
887	60,000	2 flashes with 2 eclipses, 5 sec., 1 flash, 1 eclipse 10 sec. DIAPHONE, air; blast 2.5 sec., silent 27.5 sec. Horn points southwest.	White octagonal pyramidal concrete tower, red lan- tern. 85	1877 1918
888		DIAPHONE, air; group of 2 blasts every 45 sec.; blast 3 sec., silent 3 sec., blast 3 sec., silent 36 sec. Horn points 258°.	White, square, wood; red, lantern; dwelling attached. 28	1873
889		HORN, hand, answers signals.	White, hexagonal, wood; red iron lantern. 43	1885 1929
890		Visible from 100° to 285°..... DIAPHONES (2), air; blast 2 sec., silent 58 sec. Twin horns point easterly and westerly.	Radio station, Call VBD. Storm signal on high ground, opposite lighthouse. White, square, wood; red lan- tern on roof. 31	1897
891		BELL, on buoy.....	Black.	
892			White narrow wooden struc- ture. 16	1914
893			White narrow wooden struc- ture. 16	1914

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
894	Cabot Head..... Fl. W., 10 sec.	On cliff, 0.3 miles east from entrance to Wingfield Basin. C.		Feet 80	17
		45 14.8	81 17.4		
895	LIONHEAD HARBOR..... F. G.	On breakwater, near outer end, north entrance. C.		27	12
		44 59.5	81 14.9		
896	Surprise Shoal Lighted Whis- tle Buoy. Fl. W.	In 90 feet, off west end of shoal. C.			
897	Cape Croker..... Gp. Fl. W., 5 sec. 2 flashes.	On point, 8,000 feet south- eastward from cape. C.		67	16
		44 57.5	80 57.6		
898	WIARTON..... F. R.	Near outer end of breakwater, head of Colpoj Bay. C.		19	7
		44 45.0	81 03.2		
899	Griffith Island..... Fl. W. U.	On northeast side of island. C.		85	17
		44 51.1	80 53.4		
900	Squaw Point Lighted Buoy..... Qk. Fl. W.	In 96 feet, off point. C.			
901	Owen Sound Harbor Lighted Buoy #. Fl. R.	In 18 feet. C.			
902	OWEN SOUND RANGE FRONT. F. G. Radio beacon.	On east side of mouth of Sydenham River. C.		50	14
		44 34.7	80 56.3		
903	OWEN SOUND RANGE REAR. F. G.	1,060 feet 185° from front light. C.		92	18
904	WEST PIER OUTER..... Occ. E., 14 sec. U.	Extreme outer end of pier, Owen Sound. C.			
905	Vails Point Shoal Lighted Bell Buoy. Fl. W.	In 312 feet, off point. C.			
906	MEAFORD BREAKWATER..... Fl. G. U.	On west end of breakwater, north side of entrance. C.		20	11
		44 36.9	80 35.2		
907	THORNBURY RANGE FRONT. F. R.	On west breakwater pier. C.		22	12
		44 34.2	80 27.2		
908	THORNBURY RANGE REAR. F. R.	On west side of Beaver River, 375 feet 214° from front light. C.		36	8
909	New Bank Lighted Bell Buoy. Fl. W.	In 27 feet, 6.2 miles 322° from Nottawaaga Light. C.			

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
894		DIAPHONE; group of 2 blasts every 60 sec; blast 3 sec., silent 3 sec., blast 3 sec., silent 51 sec. Horn points northeast.	Feet White, square wood; red lantern, dwelling attached. 54	Year 1896 1937
895			Storm-signal station 80 feet southeast of Lighthouse. White, square, wood. 1903 27 1944	
896		WHISTLE, on buoy.....	Black.	
897		Flash 0.3 sec, eclipse 0.7 sec., flash 0.3 sec, eclipse 3.7 sec. DIAPHONE, air; blast 5 sec., silent 55 sec. Horn points northeast.	Octagonal concrete tower, red lantern. 1902 53 1909	
898			Mast, white shed at base. 15 1891 Storm signal on outer end of breakwater.	
899			White circular stone. 1859 61 1928	
900			Black.	
901			Red.	
902		WHISTLE, electric; blast 5 sec., silent 25 sec. RADIOBEACON: Transmits on 292 kc., groups of 1 dash, 2 dots, 1 dash (— • • —) followed by 1 long dash.	Black square skeleton tower, white wooden slat work, black vertical stripe, red lantern. 1895 50 1909 Storm signal on west side of river.	
903			Square pyramidal skeleton tower, white wooden slat work on upper part, black vertical stripe on front; 2 lanterns. 1895 88 1915 1928	
904		Light 10 sec., eclipse 4 sec.		
905		BELL, on buoy.....	Black.	
906		20 flashes per minute.....	Black square pyramidal skeleton, shed alongside. 17 1906 1937	
907			Triangular daymark, lower part white, upper part red, on pole. 1837 17 1942	
908		HORN, hand, answers signals	White diamond daymark on mast, drab shed at base. 29 1901	
909		BELL, on buoy.....	Black and red horizontal bands.	



## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
910	Nottawasaga Island..... Fl. W., R. sector, 5 sec.	On north point of island...C. 44 32.3	80 15.8	Feet 86	17
911	Lockerbie Rock Lighted Buoy... Fl. W.	In 24 feet, 1,200 feet 284° from middle of rock. C.			
912	FISHERMAN POINT RANGE FRONT. P. G.	On northern extreme of Fish- erman Point. C. 44 30.5	80 12.8	33	11
913	FISHERMAN POINT RANGE REAR. P. G.	3,552 feet 150¼° from front light. C.		106	17
914	Collingwood Harbor Lighted Buoy. Fl. R.	In 30 feet.....C. 44 31.7	80 13.7		
914.5	Collingwood Harbor Lighted Buoy 17. Fl. W.	In 21 feet.....C.			
915	COLLINGWOOD SHORE RANGE FRONT. P. R.	On pier, at turn in channel... C. 44 30.7	80 13.8	29	8
916	COLLINGWOOD SHORE RANGE REAR. P. R.	2,645 feet 178¾° from front light. C.		58	9
917	Lottie Wolf Shoal Lighted Buoy. Fl. R.	In 36 feet, north of shoal...C.			
918	Hope Island..... F. W. Radiobeacon. Distance-Finding Station.	On northeast point of island... C. 44 54.8	80 10.0	54	15
919	Bennet Bank Lighted Bell Buoy. Occ. G.	In 66 feet, off southwest edge of bank. C.			
920	Giants Tomb..... Fl. W. U.	On south end of Giants Tomb Island. C. 44 52.8	80 00.5	40	13
921	Saw-log Point Lighted Buoy... Fl. R.	On north edge of shoal exten- ding northward from Saw-log Point. C.			
922	Brebeuf-McNicol Range Lighted Buoy. Fl. R.	At intersection of Brebeuf and Port McNicol range lines. C.			
922.5	Pinery Point Lighted Buoy... Fl. R.	In 34 feet, northeasterly of point. C.			
923	Candlemas Shoal Lighted Buoy Fl. W.	Off southwest edge of shoal patch. C.			

## CANADA

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
910		Red sector, of 30°, covers shoals between light and harbor. HORN, hand, answers signals.	Feet White circular stone. 85	Year 1859
911			Black.	
912			White daymark with black vertical stripe. 1942	1943
913			White diamond daymark with black vertical stripe on red skeleton tower. 1942	1942
914			Red.	
914.5	e		Black.	
915		HORN, hand, answers signals.	White, square, wood; red lantern. 1884	1906
916		Lifeboat at foot of Maple St.	Gray square skeleton tower, white inclosed upper part. 63 1902	1902
917			Storm signal near Govern- ment wharf. 1906	1906
918	20,000	DIAPHONE, air; group of 2 blasts every 60 sec.; blast 2 sec., silent 3 sec.; blast 2 sec., silent 53 sec. Horn points 35°.	White, square, wood; dwell- ing attached; red lantern. White fog-signal house, green roof, 40 feet 342° from lighthouse. 1884	1939
919		RADIOBEACON: Transmits on 292 kc., 3 groups of 2 dots, dash, dot (• • — •), followed by 3 long dashes. BELL, on buoy.	DISTANCE-FINDING STA- TION. For method of operation see p. 11.	
920	25,000		White, square, wood; dwell- ing attached. 1893	1936
921			Red.	
922			Red.	
922.5			Red.	
923	200 mm a	Radar Reflector.	Black.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
924	BREBEUF RANGE FRONT..... F. W.	On north end of Brebeuf Island. C. 44 52.5 79 53.1		Feet 40	13
925	BREBEUF RANGE REAR..... F. W.	On west shore 2,400 feet 88° from front light. C.		87	12
926	McNICOLL RANGE FRONT..... F. O.	East of Ellmere Point. C. 44 45.7 79 49.9		28	---
927	McNICOLL RANGE REAR..... F. O.	2,530 feet 152° from front light. C.		166	---
928	TIFFIN RANGE FRONT..... F. E.	On northwest end of dock. C. 44 44.8 79 51.3		81	---
929	TIFFIN RANGE REAR..... F. E.	151 feet 147° from front light. C.		53	---
930	MIDLAND RANGE FRONT..... F. E.	On hillside, in southwest part of town. C. 44 45.0 79 53.9		150	5
931	MIDLAND RANGE REAR..... F. E.	560 feet 225° from front light. C.		190	5
932	WHISKEY ISLAND..... Fl. W.	At entrance to Penetanguishene Harbor. C. 44 48.9 79 55.3		33	13
933	REFORMATORY PIER..... Fl. W.	On outer end of pier. C. 44 48.5 79 55.9		22	9
934	PENETANGUISHENE HARBOR RANGE FRONT..... F. E.	1,600 feet 117½° from mouth of Copeland Creek. C. 44 45.4 79 56.5		100	3
935	PENETANGUISHENE HARBOR RANGE REAR..... F. E.	555 feet 186° from front light. C.		143	3
936	PENETANGUISHENE HARBOR WHARF..... F. G.	On south side of wharf. C. 44 46.3 79 56.3		17	9
936.5	PENETANGUISHENE HARBOR BREAKWATER..... U. F. G.	On outer end of breakwater wharf. C. 44 46.3 79 56.4		20	---
937	MIDLAND POINT RANGE FRONT..... F. W.	0.5 mile north of point. C. 44 47.2 79 51.9		49	8
938	MIDLAND POINT RANGE REAR..... F. W.	405 feet 283° from front light. C.		85	8
939	VICTORIA HARBOR RANGE FRONT..... F. E.	On Bergia Point. C. 44 45.3 79 47.0		27	8
940	VICTORIA HARBOR RANGE REAR..... F. E.	On hill, 4,200 feet 149° from front light. C.		100	8
941	Port McNicoll Lighted Buoy... Fl. E.	On west side of channel to C. P. R. dock. C.		---	---
942	TURNING ROCK WAUBAUSHENE. Fl. W.	Waubauskene approach. C. 44 46.3 79 44.3		30	7

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
924	30,000	Bright light on range line; low power light from other points of approach.	Feet White square tower, red lan- tern. 36	Year 1900
925	---	---	Red skeleton tower, white lantern. 90	1900 1915
926	---	---	Yellow, square, wood. 27	1913 1944
927	---	---	Yellow skeleton tower, yellow slats on upper front face. 46	1913 1944
928	---	Range maintained by Cana- dian National Railway Co.	Mast. 25	---
929	---	---	Radio station; call VBC. Lantern attached to NW. wall of C. N. R. elevator.	1911 1901
930	---	Storm signal on hill on south side of entrance to harbor.	Mast. 30	1911 1901
931	---	---	Mast. 30	1901
932	e	---	Diamond day mark on pole. 1882	1946
933	e	---	Diamond day mark on pole. 1876	1946
934	6,000	---	White diamond daymark on mast. 30	1909
935	6,000	---	White diamond daymark on mast. 43	1909
936	e	---	Pole.	1986
936.5	---	---	---	1940
937	100	---	White, square, wood. 45	1912 1913
938	100	---	White, square, wood. 27	1912 1913
939	---	---	White, square, wood. 27	1910
940	---	---	White, square, wood. 32	1910
941	---	---	Red.	---
942	200 mm a	---	White, square, wood; red lan- tern. 30	1915

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
943	SEVERN RIVER RANGE FRONT. F. R.	On east shore of Sturgeon Bay. C.		Feet 20	2
944	SEVERN RIVER RANGE REAR. F. R.	44 45.3	79 43.0	26	2
945	WAUBAUSHENE RANGE FRONT. F. R.	On flat, north of channel... C.		18	2
946	WAUBAUSHENE RANGE REAR. F. R.	44 45.7	79 42.3	24	2
946.5	WAUBAUSHENE RANGE FRONT. F. G.	On pier on Rook Island... C.		8	
946.7	WAUBAUSHENE RANGE REAR. F. G.	On highway, approximately 1,425 feet from front light. C.		20	
947	TURNING ROCK... Fl. W. U.	44 45.5	79 42.1	14	
947.5	ROBERTS ISLAND... Fl. G. U.	On rock, southeast of Roberts Island, Honey Harbor. C.		35	
948	MINNICOGNASHENE RANGE FRONT. Occ. W., 0.5 sec.	44 46.3	79 44.3	25	10
949	MINNICOGNASHENE RANGE REAR. Occ. W., 1 sec.	44 51.0	79 50.2	50	14
949.3	ARDLUAN ISLAND... Fl. G. U.	On south end of island... C.		35	
949.5	KINDERSLEY ISLAND... Fl. G. U.	44 53.7	79 54.1	20	
950	NEWTON ISLAND... Fl. W. U.	On easterly island... C.		24	10
951	RED ROCK... Fl. W. U.	44 56.4	79 56.3	24	10
952	Western Island... Fl. W., 15 sec.	44 58.2	79 57.7	74	16
958	Sequin Bank Lighted Whistle Buoy. Fl. W.	On Double Top Rock... C.			
954	Red Rock... F. W.	On south end of bank... C.		60	15
955	Three Star Shoal Lighted Buoy. Fl. E.	At entrance to main channel to Parry Sound. C.			
		45 21.7	80 24.8		
		In 24 feet, 150 feet north-west of rock; 225 feet south of Snug Harbor Range line. C.			

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Peg signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
943			Feet Mast.	Year 1910
944			Mast.	1910
945			Mast.	1910
946			Mast.	1910
946.5			Mast.	1947
946.7			Mast.	1947
947			White daymark on skeleton tower, concrete base.	1914 1919
947.5			White triangular slatted beacon.	1947
948		Light 0.25 sec., eclipse 0.25 sec.	White pyramidal beacon.	1980
949		Light 0.5 sec., eclipse 0.5 sec.	White pyramidal beacon.	1930
949.3			White triangular slatted beacon.	1947
949.5			White triangular slatted beacon.	1947
950			White pyramidal beacon.	1930
951			White pyramidal beacon.	1930 1939 1895 1919
952		DIAPHONE, air; blast 3 sec., silent 27 sec.	White, octagonal, wood; red lantern.	1895 1919
953		WHISTLE, on buoy	Black.	
954		DIAPHONE, air; blast 2 sec., silent 18 sec.	Red lantern on concrete building; on black cylindrical pier.	1870 1911
955			Red.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
956	SNUG HARBOR RANGE FRONT. F. W.	On westernmost land. 45 22.3	Walton Is- land. 80 19.8	Feet 39	13
957	SNUG HARBOR RANGE REAR. F. W.	3,100 feet 70° from front light. C.		62	15
957.3	Ariel Rock Shoal Lighted Buoy.	In 30 feet..... C.		3	
957.5	Arthur Ott Shoal Lighted Buoy 11P. Fl. G.	..... C.			
958	Middle Ground Lighted Buoy. Fl. W.	Between Hall Reef and Twin Rock. C.			
959	Hooper Island Shoal Lighted Buoy. Fl. E.	In 18 feet, north of Island. C.		7	3
960	JONES ISLAND RANGE FRONT. F. W.	On summit of northernmost Gordon Rock. 45 18.9	80 17.3	40	13
961	JONES ISLAND RANGE REAR. F. W.	On southwest point of island, 8,700 feet 132° from front light. C.		63	15
962	Spruce Shoal Lighted Buoy. Fl. W.	In 28 feet, marks southerly end of shoal. C.			
963	CARLING ROCK..... Fl. E.	On north part of summit of rock. 45 20.0		26	8
963.5	SISTER ISLAND..... Fl. G.	On north side of island..... C. 45 20.1		32	
964	KILLBEAR POINT..... Fl. W.	On southwest end of point. C. 45 20.0		37	8
965	DEPOT ISLAND..... Fl. G., 4 sec.	On beach, at west end of island. 45 19.1		25	7
966	THREE MILE POINT..... Fl. W.	On point..... C. 45 20.8		38	8
966.5	McKerrel Lighted Buoy 29P. Fl. W.	..... C.			
967	DEEP WATER POINT..... Fl. E.	On point..... C. 45 20.4		26	
967	PARRY SOUND RANGE FRONT. F. G.	On southeast side of harbor. C. 45 19.8		35	8
968	PARRY SOUND RANGE REAR. F. G.	On hillside, 304 feet 151° from front light. C.		70	11
969	ROSE POINT SWING BRIDGE. F. G. F. E.	From westernmost end of Rose Point to Parry Island. C. 45 19.0			

## CANADA

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
956			Feet White, daymark with black stripes on wooden structure. 20	Year 1894 1934
957			Black dwelling with white and black stripes. 50	1894 1934
957.3			Red.	
957.5			Black.	
958			Black.	
959			Red.	
960		Visible from 112° to 292°	White, square, wood. 38	1894 1930
961			White, square, wood; on rec- tangular dwelling. 50	1894
962			Black.	
963			White, square, wood, red stripe on west side. 27	1898 1949
963.5			White daymark on pole.	1949
964			Red lantern and box on white cylinder.	1904
965		Flash 0.5 sec. Visible from 174° to 354°.	White, square, wood. 28	1898 1946
966			Gray cylindrical tank on con- crete base; red skeleton su- perstructure.	1897 1908
966.5			Black.	
967			White daymark on pole.	1949
967			White diamond daymark on mast.	1939
968			White diamond daymark on mast.	1939
969		Green light when bridge is open; red light when bridge is closed. A red and white ball is shown on mast on top of swing when bridge is open.	Storm signal station on end of Government wharf, Parry Sound.	1897

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
970	TURNING ISLAND..... Fl. W. U.	On south point of island..... 45 12.6                      80 10.2		<i>Feet</i> 30	3
971	BEAUTY ISLAND..... Fl. W. U.	On northwest point of island..... 45 13.7                      80 09.8		30	3
972	FIVE MILE NARROWS..... Fl. W. U.	On north side of Milton Is- land 60.                      C.		20	2
973	THREE MILE GAP..... Fl. W. U.	On small island at entrance to gap.                      C.		20	2
974	POINTE AU BARIL RANGE FRONT. F. W.	On south end of point..... 45 33.6                      80 30.6		38	12
975	POINTE AU BARIL RANGE REAR. F. E.	On summit of island, 4,800 feet 105° from front light. C.		93	12
976	BIGNALL NARROWS..... F. W.	On south side of channel at narrows.                      C.		18	---
977	CASTOR ISLAND..... F. W.	On Barrel Rock, 200 feet northwest of island.                      C.		14	5
978	OPEECHE..... F. W.	On south point of Opeeche Island.                      C.		12	5
979	JERGENS ISLAND..... F. E.	On southeast point of island..... C.		18	5
980	ROGERS ISLAND..... F. E.	On shoal off island..... C.		12	3
980.5	CHINGWAWK ISLAND..... F. E.	On rock off northwest end of island.                      C.		12	---
980.7	POPLAR ISLAND..... F. W.	On northwest side of island..... C.		18	---
981	Byng Inlet Lighted Whistle Buoy. Fl. W.	In 54 feet, on Byng Inlet Range line; west of Maga- natawan Ledges.                      C.		---	---
982	Gereaux Island..... F. W.	On south side of entrance to Byng Inlet.                      C.		49	14
983	BYNG INLET RANGE FRONT..... F. E.	On south side of channel.                      C.		34	9
984	BYNG INLET RANGE REAR..... F. E.	1,520 feet 74° from front light. C.		60	9

## CANADA

No.	Candlepower Apparatus Height	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
970	---	---	<i>Feet</i> White pyramidal structure.	<i>Year</i> 1925
971	---	---	White pyramidal structure.	1925
972	---	---	Red triangular daymark above white triangular day- mark on pole.                      1925	1936
973	---	---	Red triangular daymark above white triangular day- mark on pole.                      1925	1925
974	---	HORN, hand, answers signals.	White, square, wood; red lan- tern.                      1889	---
975	---	---	Square, skeleton tower, white slat work on channel face, white enclosed upper part, black vertical stripe on front face of tower.                      1889	1908
976	---	---	Pole.                      1924	---
977	---	Shown from June 15 to Sept. 30.	Lantern on iron mast.                      1922	---
978	---	Shown from June 15 to Sept. 30.	Lantern on iron mast.                      1922	---
979	---	Shown from June 15 to Sept. 30.	Mast.                      1926	---
980	---	Shown from June 15 to Sept. 30.	White diamond daymark on pole.                      1926	1930
980.5	---	Shown from June 15 to Sept. 30	Concrete base, iron pipe standard with lantern on top, shelter box at base, painted white.                      1947	---
980.7	---	Shown during summer only.	Concrete base, pipe standard, shelter box at base, painted white.                      1948	---
981	---	WHISTLE, on buoy.....	Black and white vertical stripes.	---
982	---	HORN, hand, answers signals.	White, square, wood; red lan- tern; dwelling attached.                      1870	1880
983	---	---	White, square, wood.                      1890	---
984	---	---	White, square, wood, open frame; lantern and upper part enclosed, slatted below. 49	1890

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>GEORGIAN BAY</b>					
985	BUSTARD ROCKS INNER RANGE FRONT. F. W.	219 feet	43° from rear light.	30	7
986	BUSTARD ROCKS RANGES REAR. F. W.	On rocky islet, 2.7 miles southwest of entrance to French River.		48	14
987	BUSTARD ROCKS OUTER RANGE FRONT. F. W.	45 53.4	80 57.3	27	12
988	FRENCH RIVER INNER RANGE FRONT. U. F. W.	On Lefroy Island, west side of mouth of river.		15	6
989	FRENCH RIVER INNER RANGE REAR. U. F. W.	On east side of river, 5,178 feet 26° from front light.		37	6
990	Lonely Island. Gp. Fl. W., 8 sec. 3 flashes.	On summit of north bluff.		196	23
990.5	LONELY ISLAND WEST. Fl. G. U.	On west side of island.		18	
990.7	COLLINS INLET WEST ENTRANCE. Fl. W. U.	45 33.5	81 29.0	16	
991	KILLARNEY EAST. Fl. W., 15 sec.	On Red Rock Point, 6,000 feet east of Killarney.		54	15
992	KILLARNEY WEST ENTRANCE. Fl. W. U.	On small island west of Le Hayes Point.		23	10
993	KILLARNEY WEST. F. W. U.	On Partridge Island, 6,000 feet northwest of Killarney.		37	13
994	KILLARNEY QUARRY ENTRANCE RANGE FRONT. F. W. U.	On foreshore of mainland, one-fourth mile east of quarry dock.		83	
995	KILLARNEY QUARRY ENTRANCE RANGE REAR. F. W. U.	170 feet 300° from front light.		80	
996	Ann Long Bank Lighted Buoy. Fl. W.	In 19 feet, northwest of Fish Point.			
997	Killarney Quarry Float Light. Fl. E.	1,200 feet 42° from northeast extreme of Badgaley Island.			
998	Campbell Rock Lighted Bell Buoy. Fl. E.	In 66 feet, westerly of rock.			
998.3	CAPE SMITH. Fl. W. U.	Easterly of point.		24	
998.5	Burnt Island Bank Lighted Buoy. Fl. W.	In 42 feet, easterly of bank.			

## CANADA

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel, or buoy	
			Top of lantern above ground	Established Rebuilt
985			Red lantern.	Year 1875
986		Visible except over the rocks and shoals to northeastward and eastward.	White, square, wood; red lantern.	1893
987		HORN, hand, answers signals.	White, square, wood; red lantern.	1875
988	e		White, square, wood; red lantern.	1893
989	e		White, square, wood; red lantern.	1875
990		3 flashes, 0.2 sec. each, 2 eclipses, 1.2 sec. each, 1 eclipse, 5 sec. Obscured from 327° to 46½°. FOG GUN, acetylene; 1 blast every 60 sec. 50 feet southwest of boathouse.	White, octagonal, wood; red lantern.	1939
990.5		HORN, hand, answers signals.	Steel tower.	1870
990.7			White daymark on tower.	1907
991		HORN, hand, answers signals.	White, square, wood; red lantern.	1948
992	e		White diamond daymark on pole.	1866
993	170		White, square, wood; red lantern.	1937
994			Orange diamond daymark on wooden mast.	1939
995			Orange diamond daymark on wooden mast.	1948
996			Black.	
997			Red.	
998		BELL, on buoy	Red.	
998.3	e		White daymark on pole.	1949
998.5	e		Black.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH CHANNEL</b>					
999	BADOLEY ISLAND RANGE FRONT. F. W.	On south side of island. . . . C. 45 55.5 81 36.7		39	12
1000	BADOLEY ISLAND RANGE REAR. F. W.	On southeast point of island, 0.3 mile 75° from front light. C.		61	15
1000.5	Centre Island Bank Lighted Buoy. Fl. E.	In 36 feet, southerly of bank. C.			
1000.7	LANSDOWNE CHANNEL WEST ENTRANCE. Fl. W.	Southwest of Creak Island. C. 45 56.6 81 41.8		18	
1000.8	HEYWOOD ISLAND. . . . . Fl. W.	Southwest of island. . . . . C. 45 55.4 81 47.3			
1001	MANITOWANING. . . . . F. W.	On hill in village, Manitoulin Island. C. 45 44.7 81 48.5		80	16
1001.5	SHEQUANDAH RANGE FRONT. F. W.	On outer end of Government wharf, Manitoulin Island. 45 53.7 81 55.1 C.		23	10
1001.7	SHEQUANDAH RANGE REAR. F. W.	950 feet 261½° from front light. C.		35	13
1002	Strawberry Island. . . . . F. W.	On northernmost point of is- land. C. 45 58.3 81 51.4		40	13
1003	GIBBONS POINT RANGE FRONT. F. R.	¼ mile south of Gibbons Point C. 45 58.0 81 54.5		20	5
1004	GIBBONS POINT RANGE REAR. F. R.	207 feet 258° from front light. C.		30	5
1005	Gibbons Point Float Light. . . . Fl. E.	At intersection of Gibbons Point and Goat Island Ranges. C.			
1006	GOAT ISLAND RANGE FRONT. F. R.	On south side of island. . . . C. 45 58.8 81 54.6		24	2
1007	GOAT ISLAND RANGE REAR. F. R.	850 feet 317° from front light. C.		32	2
1008	LITTLE CURRENT SWING BRIDGE. F. W. F. R. F. G.	Between Goat Island and Manitoulin Island, east of Little Current. C.			
1009	LITTLE CURRENT. . . . . F. G.	On northwest corner of warf house roof. C. 45 58.9 81 55.7		25	10
1009.5	Little Current Lighted Buoy 18. Fl. E.	500 feet 041° from Little Cur- rent Light. C.			

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
999		HOEN, hand, answers signals.	Feet White square dwelling, red lantern on roof.	Year 1912
1000			36 Brown square skeleton tower, white enclosed upper part, red lantern.	1912
1000.5			64 Red.	
1000.7			White daymark on tower.	1949
1000.8			White daymark on pole.	1949
1001			White, square, wood; red lantern.	1885
1001.5			38 White diamond daymark on mast.	1937 1909
1001.7			22 White diamond daymark on mast.	1947 1909
1002	230	HORN, hand, answers signals.	23 White square tower, red lan- tern, dwelling attached.	1947
1003		Range leads from turn off North Point of Strawberry Island to intersection with that of Goat Island Range Lights.	44 White, wood, slatted day- mark, black vertical stripe down center.	1881 1936
1004			White, square, wood, trian- gular top with black stripe down center.	1936
1005			Red.	
1006		Range leads through cut to the turn into Little Cur- rent.	Lantern on white, square, wood daymark.	1936
1007			Lantern on white triangular daymark.	1936
1008		White light marks each side of channel to be used, one on end of rest pier of swing, the other on opposite side of opening. Swing span mounted by light showing red when passage is closed, and green when open.		1913
1009				1937
1009.5			Red.	

## LAKE HURON

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH CHANNEL</b>					
1010	SPIDER ISLAND..... Fl. W. U.	On east end of island.....C. 45 59.1      81 56.8		40	7
1005	<i>Little Current Lighted Buoy #8.</i> Fl. R.	800 feet 051½° from Pointe Island Light. C.			
1011	PICNIC ISLAND..... Fl. G. U.	On northwest point of island.....C. 45 59.4      81 57.0		31	9
1012	Narrow Island..... F. W., R. sector.	On west end of island.....C. 45 59.5      81 58.8		38	13
1013	<i>James Foot Patch Float</i> ..... Fl. R. C.	In 27 feet, on southwest edge of patch. C.			
1014	<i>Clapperton Island Lighted Buoy.</i> Fl. W. C.	In 21 feet, off Logan Island Shoal. C.			
1015	CARTWRIGHT POINT..... F. W. U.	Northwest end of point.....C. 46 03.0      82 12.8		35	13
1016	<i>Robertson Rock Float Light</i> ..... Fl. R. C.	In main passage, at easterly edge of rock. C.			
1017	Clapperton Island..... F. W. C.	On north point of island.....C. 46 03.4      82 14.4		30	12
1017.5	AIRD ISLAND..... Fl. W. U.	On northeast point of island.....C. 46 03.9      82 22.8		30	
1017.9	<i>Innes Island Lighted Buoy</i> ..... Fl. R. C.	In 18 feet.....C.			
1018	GOOSEBERRY ISLAND..... Fl. W. U.	On northeast point of island on east side of entrance to Mudge Bay. C.		35	
1019	KAGAWONG..... F. W. C.	At foot of Mudge Bay.....C. 45 54.5      82 15.8		38	13
1020	TOWN POINT..... F. R. U.	West side of entrance to Gore Bay. C.		21	6
1021	Gora Bay..... F. W. C.	On Janet Head.....C. 45 58.7      82 29.0		43	13
1022	Cape Robert..... F. W. C.	On north end of cape.....C. 45 59.7      82 48.7		46	14
1022.5	<i>Blind River Approach Lighted Buoy.</i> Fl. R. C.	In 18 feet.....C.			
1023	BLIND RIVER RANGE FRONT..... F. R. C.	On outer end of Government wharf, at Harrietta Point. C.		15	7
1024	BLIND RIVER RANGE REAR..... F. R. C.	On west side of mouth of river, 1,550 feet 31° from front light. C.		40	8

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1010			Feet Red lantern on skeleton steel tower with small shed at base. 43	Year 1866 1868 1946
1005	e		Red.	
1011			Daymark on white mast, shed at base.	1836 1943
1012		Red from 75° to 92°, covers Foster Bank and shoals near, and marks shoals ex- tending westward from head of island. HORN, hand, answers signals.	White, rectangular, wood; red lantern on roof. 37	1890 1902
1013			Red superstructure on float.	
1014	e		Black.	
1015			White diamond daymark with black vertical stripe on mast.	1934
1016			Red.	
1017		HORN, hand, answers signals	White, square, wood; red lantern. 25	1866
1017.5			Steel, beacon-type super- structure.	1948
1017.9			Red.	
1018			Pole.	1944
1019			White square tower, red lan- tern. 27	1888 1894
1020			Mast, white shed at base.	1928
1021		HORN, hand, answers signals.	White, square, wood; red lan- tern; dwelling attached. 40	1879
1022		HORN, hand, answers signals.	White, square, wood; red lan- tern; dwelling attached. 41	1885
1022.5	e		Red.	
1023			Lantern on corner of drab storehouse.	1900 1905
1024			Mast.	1900 1905



## LAKE HURON AND ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH CHANNEL</b>					
1025	EDDY WHEARVES RANGE FRONT. F. R.	On elevated way, west of west wharf. C.		30	8
1026	EDDY WHEARVES RANGE REAR. F. R.	280 feet 3° from front light. C.		40	8
1027	Mississagi Island.----- Fl. W. U.	On south end of island. C. 46 06.4 83 00.5		60	7
1028	BATTURE ISLAND.----- Fl. W. U.	On northwest point of island on east side of entrance to Meldrum Bay. C.		80	
1029	MELDRUM BAY.----- F. R.	On Government wharf. C. 45 58.2 83 04.2		25	10
1030	TOLSONVILLE WHARF.----- F. W. U.	On old wharf. C. 45 57.6 83 19.0		18	7
1031	SULPHUR ISLAND.----- Fl. W. U.	On south end of island. C. 46 08.7 83 36.5		49	14
1032	O'Donnell Bank Lighted Buoy. U. R.	In 23 feet, on southwest edge of shoal. C.			
1032	North Seins Island Lighted Buoy. Fl. W.	In 48 feet, northerly of island. C.			
1033	Worsley Bay Shoal Lighted Buoy. Fl. W.	In 24 feet, north of Burnt Is- land Reef. C.			
1034	KOSHEAWONG POINT.----- Fl. R. U.	46 07.8 83 48.8		14	6
1035	Macomb Island Lighted Buoy. Fl. W.	In 30 feet, northwesterly of island. C.			
1036	Archibald Island Lighted Buoy. Fl. R.	In 30 feet, southeasterly of island. C.			
1033	THESSALON.----- F. W.	Near end of Thessalon Point. C.		30	12
1034	THESSALON RANGE FRONT.----- F. G.	On north side of east wharf. C.		17	9
1035	THESSALON RANGE REAR.----- F. G.	46 15.3 83 33.1 1,320 feet 15½° from front light. C.		33	12
<b>ST. MARYS RIVER ST. JOSEPH CHANNEL</b>					
1036	BRUCE MINES McKAY ISLAND.----- F. W.	On east end of island. C. 46 16.9 83 46.9			13
1037	GOVERNMENT WHARF.----- F. R.	On outer end of wharf. C. 46 17.8 83 47.4		12	6
1038	HILTON.----- F. R.	On outer end of wharf. C. 46 15.6 83 53.3			

## CANADA

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1025			Feet White diamond daymark with black vertical stripe on mast. 1905 1933	Year 1854 1948
1026			White diamond daymark with black vertical stripe on mast. 1905 1933	1854 1948
1027		Obscured from 140° to 208°.	Steel tower.	1854 1948
1028			Pole.	1944
1029		HORN, hand, answers sig- nals.	Mast on corner of warehouse.	1937
1030			Lantern on iron mast. 1933 1947	1933 1947
1031			White octagonal tower, red lantern. 1869 43 1928	1869 1928
1032			Black.	
1033			Black.	
1034			White and red daymark on tower. 1949	1949
1035			Black.	
1036			Red.	
1033		HORN, hand, answers signals.	White, square, wood; red lan- tern on dwelling. 1898 30	1898
1034	R f e	HORN, hand, answers signals.	White diamond daymark on mast. 1930	1930
1035	R f e		White diamond daymark on mast. 1930	1930
1036			White square wooden dwell- ing, red lantern on roof. 1907 34	1907
1037		HORN, hand, answers signals.	Gray rectangular warehouse, brown roof. 1902	1902
1038			Lantern on front of freight shed. 1914 1931	1914 1931

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ST. JOSEPH CHANNEL</b>					
1030	West Sister Rock F. W.	On rock 46 18.3	C. 83 54.8	Feet 35	13
1040	WILSON CHANNEL RANGE FRONT F. W.	On mainland, opposite north- west point of Wilson Island.	C.	58	3
1041	WILSON CHANNEL RANGE REAR F. W.	46 19.4 730 feet 53¼° from front light.	83 55.9 C.	100	3
1042	RICHARDS LANDING F. G.	On wharf 46 17.7	C. 84 02.2	16	3
1043	SHOAL ISLAND F. W.	On north end of island, south side of channel.	C. 84 04.6	32	5
1044	Cambria Bank Lighted Buoy Fl. W.	In 24 feet, 2,110 feet 71° from Harwood Point.	C.		
<b>DETOUR PASSAGE</b>					
1045	Crab Island Shoal Lighted Gong Buoy 4. Fl. E., 4 sec.	In 31 feet, off west end of shoal.		13	7
1046	FRYING PAN ISLAND DOCK Fl. G., 2.5 sec.	On south point of island 45 59.2	83 53.7	70 15	11
<b>LOWER RIVER</b>					
1047	Watson Reefs Lighted Buoy 5. Fl. G., 4 sec.	In 35 feet, opposite center of reefs.		10	
1048	Pipe Island Shoal Lighted Buoy 7. Fl. W., 4 sec.	In 40 feet, on southeast side of shoal.		10	
1049	Pipe Island Gp. Fl. E., F. R. sector, 5 sec. 2 flashes.	On south side of island 46 00.0	83 54.0	52 15	12
1050	PIPE ISLAND TWINS Fl. W., 2.5 sec.	On northeast side of East Twin Island. 46 01.6	83 53.5	26	
1051	SQUAW ISLAND Fl. E., 2.5 sec.	On south point of island 46 02.3	83 54.2	26	
1052	SWEETS POINT Fl. G., 2 sec.	On northern edge of shoal 46 02.3	83 56.2	44	14
1054	Lime Island Traffic Lighted Buoy. E-L. Fl. W.	In 55 feet, vessels are re- quired to leave buoy on port hand in passing.		10	9
1055	Lime Island Lighted Buoy 13. Fl. W., 4 sec.	In 24 feet		10	

## CANADA AND MICHIGAN

No.	Candlepower Apparatus Euminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1030		HORN, hand, answers signals.	Red White, hexagonal, wood; red lantern; on pier. 30 28	Year 1885 1905 1905
1040			White, square, wood; red lan- tern.	1905
1041			White, square, wood. 28	1905
1042			Lantern on warehouse.	1894 1901
1043		HORN, hand, answers signals.	White square dwelling, lan- tern on roof. 34	1885 1909
1044			Black.	
1045	30 200 mm e	Flash 0.4 sec. GONG, on buoy. Radar Reflector.	Red. Nun station buoy.	
1046	200 300 mm e 25 200 mm a	Flash 0.5 sec. Standby light shows same characteristic as main light on southeast corner of coal elevator.	On tower, top of coal eleva- tor. 1885 1937	
1047	20 200 mm a	Flash 0.4 sec.	Black. Can station buoy.	
1048	110 200 mm a	Flash 0.4 sec.	Black. Can station buoy.	
1049	Fl. 250 300 mm a F. 5,000 Rg e 250 300 mm a	Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 2 sec. Fixed red from 353° to 355°. Standby light, Fl. R., 5 sec., flash 2 sec. without F. R. sector. Placed in oper- ation after seasonal closing and before seasonal com- missioning of regular light.	Yellow octagonal tower, skel- eton superstructure. 44 1888 1937	
1050	1,100 300 mm e	Flash 0.5 sec.	Black skeleton tower, tank house in base, on pier. 25	1919
1051	250 300 mm e	Flash 0.5 sec.	Red skeleton tower, tank house in base, on pier. 26	1919
1052	500 375 mm e	Flash 0.5 sec. BELL; 1 stroke every 15 sec. (CO <sub>2</sub> ).	White skeleton tower with white base.	1948
1054	140 200 mm e	A short flash and a long flash.	Black and white vertical stripes.	
1055	140 200 mm e	Flash 0.4 sec.	Black.	

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LOWER RIVER</b>					
1055	Lime Island Lighted Buoy 14. Fl. R., 4 sec.	In 25 feet, off northwest end of Lime Island.		Feet 8	7
1058	ROUND ISLAND. Fl. W., R. sector. 2.5 sec. U.	On northeast side of island. 46 08.6	84 01.2	29	
1057	Hay Point Reef Lighted Buoy 20. Fl. R., 4 sec.	In 26 feet, on channel bank at turn.		10	
1058	Point aux Frenes Lighted Buoy 21. Qk. Fl. G.	In 25 feet, on channel bank at turn.		13	
1059	POINT AUX FRENES PASSING RANGE SOUTH FRONT. Fl. W., 3 sec. U.	In 3 feet, 700 feet 101½° from rear light.		24	
1060	POINT AUX FRENES PASSING RANGE REAR. F. W. U.	On northeast end of Point. 46 07.9	84 01.7	50	
1061	POINT AUX FRENES PASSING RANGE NORTH FRONT. Fl. W., 3 sec. U.	In 3 feet, 540 feet 42° from rear light.		24	
1062	Point aux Frenes Lighted Bell Buoy 23. Qk. Fl. W.	In 24 feet on channel bank at turn.		10	
1063	Point aux Frenes Lighted Buoy 24. Fl. R., 4 sec.	In 26 feet, at turn of channel.		10	
<b>LAKE MUNUSCONG</b>					
1064	WINTER POINT RANGE FRONT. F. W. U.	On south end of Neebish Island. 46 13.1	84 09.0	22	
1065	Upbound WINTER POINT RANGE REAR. F. W. U.	875 feet 310½° from front light		63	
1066	HAY POINT RANGE FRONT. Fl. W. U.	On St. Joseph Island. 46 07.7	C. 84 00.0	25	
1067	Downbound HAY POINT RANGE REAR. 2 F. W. U.	1,100 feet 128° from front light.	C.	60	
1068	Lake Munuscong Lighted Buoy 25. Fl. R., 4 sec.	In 25 feet.		10	7
1069	Lake Munuscong Lighted Bell Buoy 1 Qk. Fl. W.	In 43 feet at turn into Sailors Encampment Channel.		10	
1070	PILOT ISLAND RANGE FRONT. Occ. W., 2 sec. U.	On island west of Rooky Point. 46 10.8	84 08.0	47	
1071	Upbound PILOT ISLAND RANGE REAR. F. W. U.	1,885 feet 195½° from front light.		67	
1072	Lake Munuscong Lighted Buoy 30. Qk. Fl. R.	In 30 feet, 1½ miles west of Two Tree Island.		10	

## MICHIGAN AND CANADA

No.	Candlepower Apparatus luminaut	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1055	30 200 mm a	Flash 0.4 sec.	Feet Red. Spar station buoy.	Year
1056	W. 1,200 R. 250 300 mm e	Flash 0.5 sec. Red from 1° to 181°.	Black skeleton tower.	1892 1923
1057	30 200 mm e	Flash 0.4 sec.	Red. Spar station buoy.	
1058	30 200 mm a	75 flashes per minute.	Black. Can station buoy.	
1059	140 200 mm e	Flash 0.3 sec. Visible from 246° to 319°.	White diamond daymark on single pile structure, unpainted.	1943
1060	140 200 mm e	Visible from 175° to 315°... Lights on these ranges will be maintained only at the opening and closing of navigation, when lighted buoys are not in place.	White square daymark on tree, unpainted.	46 1943
1061	140 200 mm e	Flash 0.3 sec. Visible from 170° to 255°.	Diamond daymark on single pile structure, unpainted.	1943
1062	110 200 mm a	75 flashes per minute. BELL, on buoy.	Black. Can station buoy.	
1063	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1064	15,000 Rf e		White diamond daymark on skeleton tower.	1892 1921
1065	15,000 Rf e		Black daymark on skeleton tower.	1892 1931
1066			White diamond daymark on skeleton tower.	1944
1067		2 lights mounted side by side.	White diamond daymark on skeleton tower.	1844
1068	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1069	110 200 mm a	Flashes interrupted by eclipse. BELL, on buoy.	Red and black horizontal bands.	
1070	20,000 Rg e	Light 1 sec., eclipse 1 sec.	White rectangular daymark on steel tower.	1894 1905
1071	20,000 Rg e		White rectangular daymark on steel tower.	1894 1905
1072	30 200 mm e	75 flashes per minute.	Red. Nun station buoy.	

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE MUNUSCONG</b>					
1073	Lake Munuscong Lighted Buoy 36. Fl. R., 4 sec.	In 20 feet, 8,300 feet south- westerly of Everens Point.		10	-----
<b>SAILORS ENCAMPMENT CHANNEL</b>					
1074	SAILORS ENCAMPMENT RANGE FRONT. F. W. Upbound	On Rains Hill, St. Joseph Island. 46 15.7 84 05.9	C.	35	6
1075	SAILORS ENCAMPMENT RANGE REAR. F. W.	807 feet 18° from front light. C.		83	7
1076	Encampment Channel Lighted Buoy 1. Fl. W., 4 sec.	In 20 feet. Abreast Sailors Encampment Mill Dock.		10	-----
1077	Encampment Channel Lighted Buoy 2. Fl. R., 4 sec.	In 25 feet. Abreast Sailors Encampment Mill Dock.		10	-----
1078	JOHNSONS POINT Fl. G., 2.5 sec.	In 10 feet, off point, at turn into Dark Hole Passage at Coast Guard Lookout Tower No. 1. 46 15.3 84 06.1		24	-----
1079	Encampment Channel Lighted Buoy 5. Fl. R., 4 sec.	In 22 feet, on east side of channel off Johnsons Point.		10	-----
1080	Encampment Channel Lighted Buoy 7. Fl. W., 4 sec.	In 22 feet, on west side of channel, off Johnsons Point.		10	-----
1081	RAINS WHARF RANGE FRONT. F. R.	On shore, north of wharf, St. Joseph Island. 46 15.3 84 05.7	C.	21	2
1082	RAINS WHARF RANGE REAR. F. R.	435 feet 134¼° from front light C.		22	2
1083	POINT OF WOODS RANGE FRONT. Occ. R., 2 sec.	On east side of Neebish Is- land. 46 16.3 84 07.2		26	-----
1084	POINT OF WOODS RANGE REAR. F. R.	330 feet 314¼° from front light.		42	-----
1085	Encampment Channel Lighted Buoy 14. Gk. Fl. R.	In 24 feet, opposite Reed Point, at turn.		10	-----
<b>MUNUSCONG CHANNEL</b>					
1086	DARK HOLE EAST RANGE FRONT. Fl. R., 1 sec.	On point of Neebish Island. 46 15.9 84 06.9		33	-----
1087	DARK HOLE EAST RANGE REAR. F. R.	930 feet 176¼° from front light. Range marks eastern half of channel.		79	-----

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1073	30 200 mm a	Flash 0.4 sec.-----	Red.	Spar station buoy. Year
1074	-----	-----	White square tower, red lan- tern roof.	1892 1909
1075	-----	-----	White square tower, red lan- tern roof.	1892 1909
1076	110 200 mm a	Flash 0.4 sec.-----	Black.	Spar station buoy.
1077	80 200 mm a	Flash 0.4 sec.-----	Red.	Spar station buoy.
1078	30 300 mm a	Flash 0.5 sec.-----	Black post and tanks on pier.	1914
1079	80 200 mm a	Flash 0.4 sec.-----	Red.	Spar station buoy.
1080	110 200 mm a	Flash 0.4 sec.-----	Black.	Spar station buoy.
1081	-----	-----	Mast.	1892 15
1082	-----	-----	Mast.	1892 22
1083	40 300 mm a	Light 1 sec., eclipse 1 sec.-----	White diamond daymark on mast, tank house alongside on concrete pier.	1892 1921
1084	40 300 mm a	-----	White diamond daymark on black skeleton tower on white tank house on con- crete pier.	1892 1921
1085	30 200 mm e	75 flashes per minute-----	Red.	Spar station buoy.
1086	1,000 Rg a 25	Flash 0.3 sec. Visible on range line only. Flash 0.3 sec. Visible from 176° to 305°.	Red square pyramidal tower.	1892 1946
1087	150 mm a 1,100 Rg a	-----	Red skeleton tower, upper part inclosed.	1892 1930

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>MUNUSCONG CHANNEL</b>					
1038	HARWOOD POINT EAST RANGE FRONT. U. Fl. W., 1 sec. Upbound	On southeast end of Sugar Island. 46 19.3 84 07.2		Feet 29	
1039	HARWOOD POINT EAST RANGE REAR. U. F. W.	1,000 feet 358½° from front light.		61	
1090	Coyle Point Lighted Buoy 18. Fl. R., 4 sec.	In 24 feet, at angle of east bank, abreast Coyle Point.		10	
1091	Munuscong Channel Lighted Buoy 28. Fl. W., 4 sec.	In 20 feet, off Field Point.		10	
1092	Munuscong Channel Lighted Buoy 24. Fl. R., 4 sec.	In 20 feet, off Green Point.		10	
1093	Munuscong Channel Lighted Buoy 27. Qk. Fl. W.	In 22 feet. Marks turn into Middle Neebish Channel.		10	
1094	STRIBLING POINT SHORE. U. Fl. W.	On point. C.		18	6
<b>MIDDLE NEEBISH CHANNEL</b>					
1095	STRIBLING POINT RANGE FRONT. U. F. W. Upbound	On northwest end of St. Joseph Island. Marks north half of channel. C.		30	6
1096	STRIBLING POINT RANGE REAR. U. F. W.	On hillside, 1,447 feet 111½° from front light. C.		53	6
1097	MIDDLE NEEBISH CHANNEL NORTH RANGE FRONT. U. Fl. W., 1 sec. Upbound.	In 18 feet, at junction with Lake Nicolet Channel. 46 20.0 84 11.1		31	
1098	MIDDLE NEEBISH CHANNEL NORTH RANGE REAR. U. F. W.	In 14 feet, 2,500 feet 292° from front light.		46	
1099	Middle Neebish Channel Lighted Buoy 31. Fl. W., 4 sec.	In 22 feet. Marks turn into Middle Neebish Channel.		10	
1100	Middle Neebish Channel Lighted Buoy 39. Fl. W., 4 sec.	In 25 feet. Abreast south end of dike.		10	
1101	MIDDLE NEEBISH CHANNEL U. 40. Fl. R., 4 sec.	On east end of dike. 46 19.4 84 08.9		26	
1102	MIDDLE NEEBISH CHANNEL U. 44. Fl. R., 4 sec.	At center of dike. 46 19.6 84 09.5		26	
1103	Middle Neebish Channel Lighted Buoy 45. Fl. W., 4 sec.	In 22 feet, on south edge of channel.		10	
1104	MIDDLE NEEBISH CHANNEL U. 48. Fl. R., 4 sec.	At upper end of dike adjacent to lookout tower at Coast Guard Station No. 2. 46 19.8 84 10.2		26	

✓ Note.—Telephone at the residence of keeper of the lights in Middle Neebish Channel, located on the west shore.

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Diameter	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1038	3,000 Rg a	Flash 0.3 sec.	Feet White square pyramidal tower.	Year 1930
1089	3,000 Rg a		White daymark on black skeleton tower.	1930
1090	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1091	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1092	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1093	140 200 mm o	75 flashes per minute.	Black. Spar station buoy.	
1094			Mast, small white shed at base.	1927
1095		Visible from all points of approach.	White, square, wood. 33	1900 1902
1096			White, square, wood; white lantern. 23	1900 1902
1097	170 300 mm a	Flash 0.3 sec.	White oval daymark on skeleton tower on concrete pier.	1895 1931
1098	3,500 Rg a		White oval daymark on skeleton tower on concrete pier.	1895 1920
1099	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1100	140 200 mm e	Flash 0.4 sec.	Black. Spar station buoy.	
1101	25 200 mm a	Flash 0.4 sec.	Red skeleton tower and tank house on concrete pier.	1895 1931
1102	25 200 mm a	Flash 0.4 sec.	Red skeleton tower and tank house on concrete pier.	1895 1931
1103	140 200 mm e	Flash 0.4 sec.	Black. Spar station buoy.	
1104	25 200 mm a	Flash 0.4 sec.	Red skeleton tower and tank house on concrete pier.	1895 1931

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>MIDDLE NEEBISH CHANNEL</b>					
1106	Middle Neebish Channel Lighted Buoy 49. Fl. W., 4 sec.	In 20 feet, on south edge of channel. Near junction with Nicolet Lower Channel.		10	
<b>LAKE NICOLET</b>					
1108	Lake Nicolet Lighted Buoy 58. Fl. E., 2.5 sec.	In 26 feet, on north edge of channel at turn.		10	
1107	LOWER NICOLET EAST RANGE FRONT. Fl. E., 1 sec.	On north end of Neebish Island. Marks east half of channel.		55	
1108	UPBOUND. LOWER NICOLET EAST RANGE REAR. Fl. E.	48 19.5 S4 10.5 1,760 feet 150% from front light.		77	
1109	Lake Nicolet Lighted Buoy 57. Fl. W., 4 sec.	In 26 feet, on west side of channel.		10	
1110	Lake Nicolet Lighted Buoy 58. Fl. E., 4 sec.	In 26 feet, on east side of channel.		10	
1111	Lake Nicolet Lighted Buoy 63. Fl. W., 4 sec.	In 26 feet, on west side of channel.		10	
1112	Lake Nicolet Lighted Buoy 64. Fl. E., 4 sec.	In 26 feet, on east side of channel.		10	
1113	NINE-MILE POINT. Fl. E., 2.5 sec.	In 12 feet, off point. 46 23.8 S4 13.8		32	7
1113.5	Lake Nicolet Lighted Buoy 67. Fl. G., 4 sec.	In 30 feet, on west side of channel.		10	
(For continuation Lake Nicolet, see No. 1155.)					
<b>WEST NEEBISH CHANNEL</b>					
(Upbound see No. 1070)					
<b>DOWNBOUND</b>					
1114	WEST NEEBISH CHANNEL UPPER LEADING. Fl. W.	On extended axis of West Neebish Channel upper course.		60	
1115	WEST NEEBISH CHANNEL 50. Fl. R.	46 20.5 S4 12.3 In 22 feet. At entrance to out.		32	
1116	West Neebish Channel Lighted Buoy 49. Fl. G., 4 sec.	In 25 feet. At entrance to out.		10	
1117	West Neebish Channel Lighted Buoy 49. Fl. R., 4 sec.	In 25 feet.		10	
1118	WEST NEEBISH CHANNEL 45. Fl. G.	In 9 feet. At beginning of turn into West Neebish Channel.		32	
1119	WEST NEEBISH CHANNEL 44. Fl. E., 2.5 sec.	At junction of courses 4 and 5.		32	

## MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1105	140 200 mm e	Flash 0.4 sec.	Feet	Year
1105			Black.	Spar station buoy.
1108	80 200 mm e	Flash 0.5 sec.	Red.	Spar station buoy.
1107	1,000 Rg a	Flash 0.3 sec.	Red square pyramidal tower, red vertically slatted day- mark.	1895 1905 52 1909
1108	1,100 Rg a		Red daymark on square pyramidal tower.	1895 76 1909
1109	110 200 mm a	Flash 0.4 sec.	Black.	Spar station buoy.
1110	20 200 mm a	Flash 0.4 sec.	Red.	Spar station buoy.
1111	110 200 mm a	Flash 0.4 sec.	Black.	Spar station buoy.
1112	20 200 mm a	Flash 0.4 sec.	Red.	Spar station buoy.
1113	45 300 mm a	Flash 0.5 sec.	Red column adjoining lamp house on concrete pier.	1895 1913
1113.5	80 200 mm e	Flash 0.4 sec.	Black.	
1114	3,000 Rg a	On same structure as Middle Neebish South Range Rear Daybeacon.	Red skeleton tower, upper part inclosed, on concrete pier.	1930
1115	45 200 mm a		Red column adjoining lamp house.	1908 1913
1116	30 200 mm e	Flash 0.4 sec.	Black.	Spar station buoy.
1117	30 200 mm e	Flash 0.4 sec.	Red.	Spar station buoy.
1118	30 300 mm a		Black column adjoining lamp house.	1908 1913
1119	45 300 mm a	Flash 0.5 sec. Obscured from 289° to 330°.	Red column adjoining lamp house.	

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST NEEBISH CHANNEL</b>					
DOWNBOUND					
1120	WEST NEEBISH CHANNEL RANGE FRONT. F. G.	On axis of West Neebish Channel Course 5. 46 17.2	84 12.9	65	
1121	WEST NEEBISH CHANNEL RANGE REAR. F. G.	1,950 feet 182½° from the front light.		140	
1122	West Neebish Channel Lighted Buoy 48. Fl. R., 4 sec.	In 25 feet.....		10	
1123	West Neebish Channel Lighted Buoy 41. Fl. G., 4 sec.	In 27 feet.....		10	
1124	West Neebish Channel Lighted Buoy 38. Fl. R., 4 sec.	In 25 feet.....		10	
1125	West Neebish Channel Lighted Buoy 37. Fl. W., 4 sec.	In 25 feet.....		10	
1126	West Neebish Channel Lighted Buoy 34. Fl. R., 4 sec.	In 25 feet.....		10	
1127	West Neebish Channel Lighted Buoy 33. Fl. G., 4 sec.	In 27 feet.....		10	
1128	West Neebish Channel Lighted Buoy 30. Fl. R., 4 sec.	In 25 feet.....		10	
1129	West Neebish Channel Lighted Buoy 29. Fl. W., 4 sec.	In 25 feet.....		10	
1130	West Neebish Channel Lighted Buoy 25. Qk. Fl. R.	In 25 feet.....		10	
1131	WEST NEEBISH CHANNEL 23. Fl. G., 4 sec.			32	
1132	WEST NEEBISH CHANNEL 22. F. R.	At lower end of turn.....		28	
1133	WEST NEEBISH ROCK CUT LOWER LEADING. F. W.	On Neebish Island, abreast Sawmill Point. 46 15.1	84 10.6	46	
1134	ROCK CUT FOG SIGNAL.....	On lookout tower at Coast Guard Station 4.			
1135	WEST NEEBISH CHANNEL 20. Fl. R., 4 sec.			82	
1136	WEST NEEBISH CHANNEL 19. Fl. G., 4 sec.	46 16.9	84 12.5	32	

## MICHIGAN

No.	Candlepower Apparatus Mountant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1120	45,000 Rg e	-----		
1121	45,000 Rg e	-----		
1122	30 200 mm e	Flash 0.4 sec.....		
1123	30 200 mm e	Flash 0.4 sec.....		
1124	30 200 mm a	Flash 0.4 sec.....		
1125	110 200 mm a	Flash 0.4 sec.....		
1126	30 200 mm e	Flash 0.4 sec.....		
1127	30 200 mm e	Flash 0.4 sec.....		
1128	30 200 mm e	Flash 0.4 sec.....		
1129	140 200 mm e	Flash 0.4 sec.....		
1130	30 200 mm e	75 flashes per minute.....		
1131	30 300 mm a	Flash 0.4 sec.....		
1132	45 800 mm a	-----		
1133	2,500 Rg e	-----		
1134	-----	HORN, diaphragm, electric; blast 2 sec., silent 13 sec. In case of failure, hand-operated bell will be used to answer signals from vessels.		
1135	45 300 mm a	Flash 0.4 sec.....		
1136	30 300 mm a	Flash 0.4 sec.....		

Fact	Year
Skeleton tower, up stream face white. On concrete base.	1929
White steel tower with white rectangular daymark.	1941
Red. Spar station buoy.	
Black.	
Red. Spar station buoy.	
Black. Spar station buoy.	
Red. Spar station buoy.	
Black. Spar station buoy.	
Red. Spar station buoy.	
Black. Spar station buoy.	
Red. Spar station buoy.	
Black column adjoining lamp house.	1908 1918
Red skeleton tower with tank house on concrete pier.	1908 1944
White daymark on black skeleton tower.	1938
White tower.	1928
Red column adjoining lamp house.	1908 1913
Black column adjoining lamp house.	1908 1913

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST NEEBISH CHANNEL</b>					
DOWNBOUND					
1136.3	WEST NEEBISH CHANNEL 18A. Fl. R., 4 sec. U.			Fath 24	
1136.7	WEST NEEBISH CHANNEL 17A. Fl. G., 4 sec. U.			24	
1137	WEST NEEBISH CHANNEL 18 Fl. R., 4 sec. U.	On east side of cut.....		32	
1138	WEST NEEBISH CHANNEL 17 Fl. G., 4 sec. U.	In 15 feet.....		32	
1139	West Neebish Channel Lighted Buoy 16. Fl. R., 4 sec. U.	In 25 feet.....		10	
1140	Sawmill Point Lighted Buoy 16. Qk. Fl. G. U.	In 25 feet.....		10	
1141	MOON ISLAND LEADING..... F. G. U.	On northern end of island.....		48	
1142	WEST NEEBISH CHANNEL 14 Fl. R., 4 sec. U.	In 15 feet.....		32	
1143	West Neebish Channel Lighted Buoy 13. Fl. G., 4 sec. U.	In 27 feet.....		10	
1144	WEST NEEBISH CHANNEL 12 F. R. U.	In 12 feet, at beginning of turn.		32	
1145	WEST NEEBISH CHANNEL 11. Fl. G., 4 sec. U.	In 10 feet, at angle of cut.....		32	
1146	Moon Island Lighted Buoy 9 Fl. W., 4 sec. U.	In 25 feet.....		10	
1147	WEST NEEBISH CHANNEL 10. F. R. U.	In 17 feet, at lower end of turn.		32	
1148	MOON ISLAND FOG BELL.....	On pier, at West Neebish Channel Light 10.			
1149	WEST NEEBISH CHANNEL 6..... F. R. U.	In 6 feet. South of Winter Point.		32	
1150	WEST NEEBISH CHANNEL 5..... F. G. U.	In 6 feet.....		32	
1151	West Neebish Channel Lighted Buoy 8. Fl. R., 4 sec. U.	In 25 feet.....		10	
1152	West Neebish Channel Lighted Buoy 1. Fl. W., 4 sec. U.	In 25 feet.....		10	

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1136.3	70 200 mm e	Flash 0.4 sec.....	Red Red column adjoining bat- tery house.	Year 1947
1136.7	60 200 mm e	Flash 0.4 sec.....	Black column adjoining bat- tery house.	1947
1137	45 300 mm a	Flash 0.4 sec.....	Red column adjoining lamp house.	1908 1913
1138	30 300 mm a	Flash 0.4 sec.....	Black column adjoining lamp house.	1908 1913
1139	30 200 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	
1140	30 200 mm e	75 flashes per minute.....	Black. Spar station buoy.	
1141	1, 200 Rg e		White rectangular daymark on skeleton tower.	1943
1142	46 300 mm a	Flash 0.4 sec.....	Red column adjoining lamp house.	1908 1913
1143	30 200 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
1144	45 300 mm a		Red column adjoining lamp house.	1908 1913
1145	30 300 mm a	Flash 0.4 sec.....	Black column adjoining lamp house on concrete base.	1908 1920
1146	140 200 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
1147	45 300 mm a		Red skeleton tower on con- crete base.	1908 1920
1148		BELL, hand, answers signals.	Black skeleton framework.	1928
1149	45 300 mm a		Red column adjoining lamp house.	1908 1913
1150	30 300 mm a		Black column adjoining lamp house.	1908 1913
1151	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1152	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	



## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE GEORGE CHANNEL</b>					
1153	HEN AND CHICKENS RANGE FRONT. U. Fl. R., 2 sec.	On Hen Island.....		16	
		46 18.7	84 07.7		
1154	HEN AND CHICKENS RANGE REAR. U. F. R.	1,200 feet 231° from front light.		27	
<b>LAKE NICOLET</b>					
1155	UPPER NICOLET RANGE FRONT. U. Fl. W., 1 sec. Upbound.	In 20 feet, on east side of lake.		31	
		46 26.2	84 15.3		
1156	UPPER NICOLET RANGE REAR. F. W.	3,200 feet 339½° from front light.		80	
1157	Nine Mile Point Lighted Buoy 70. Fl. R., 4 sec.	In 28 feet. 4,620 feet north- orly of Chapman Dock.		10	
1157	Lake Nicolet Lighted Buoy 71. Fl. G., 4 sec.	In 29 feet, on west side of channel.		10	
1158	Six Mile Point Lighted Buoy 76. Fl. G., 4 sec.	In 24 feet. Marks turn into upper channel.		10	
1159	FRECHETTE POINT RANGE FRONT. U. F. G. F. O. Up and down bound.	In 3 feet, below point.....		38	
		46 27.3	84 16.7		
1160	FRECHETTE POINT RANGE REAR. U. F. G.	2,750 feet 323° from front light.		80	
1161	Lake Nicolet Lighted Buoy 77. Fl. G., 4 sec.	In 25 feet.....		10	
1162	Lake Nicolet Lighted Buoy 78. Fl. R., 4 sec.	In 21 feet, nearly abreast in- tersection of Six-Mile Point and Frechette Point range lines.		10	
<b>LITTLE RAPIDS CUT</b>					
1103	SIX-MILE POINT RANGE FRONT. U. F. W.	In 8 feet, ¼ mile above point.		20	
		46 26.3	84 15.9		
1164	SIX-MILE POINT RANGE REAR. U. F. W.	1,075 feet 163° from front light.		45	
1165	LITTLE RAPIDS CUT S1..... Fl. G., 2.5 sec.	On Island 1, on lower west side of cut.		18	
		46 28.4	84 17.5		
1166	LITTLE RAPIDS CUT S2..... Fl. R., 2.5 sec.	On Island 1, on lower east side of cut.		20	
1167	LITTLE RAPIDS CUT S4..... F. R.	Off north end of Island 1.....		18	
1168	LITTLE RAPIDS CUT S3..... F. G.	On Missalon Point, north en- trance to cut.		18	

## MICHIGAN

No.	Candlepower Apparatus illumina-	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1153	30 300 mm a	Flash 0.3 sec.....	Feet White diamond daymark on mast.	Year 1892 1931
1154	30 300 mm a	-----	White diamond daymark on pyramidal tower on concrete pier.	1892 1931
1155	200 300 mm a	Flash 0.3 sec..... BELL; 1 stroke every 15 sec. (CO <sub>2</sub> )	White daymark on black skelton tower, on tank house with white front, on concrete pier.	1895 1913
1156	3,500 Rf a	-----	White daymark on black square tower on concrete pier.	1895 1913
1157	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1157	30 200 mm e	Flash 0.4 sec.....	Black.	
1158	20 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1159	25,000 Rf e 350 300 mm e	Visible on range line only... Visible around the horizon.	White daymark on black skelton tower.	1895
1160	25,000 Rf e	Visible on range line only... -----	White daymark on black skelton tower.	1895 1921
1161	30 200 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
1162	30 200 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	
1163	60,000 Rf e	-----	White cylindrical tower on concrete pier.	1895 1921
1164	60,000 Rf a	-----	White cylindrical tower on concrete pier.	1895 1921
1165	30 300 mm a	Flash 0.5 sec.....	Black mast, tanks at base.	1895 1913
1166	45 300 mm a	Flash 0.5 sec.....	Red mast, tanks at base.	1895 1913
1167	150 150 mm e	-----	Red mast.	1895 1935
1168	120 150 mm e	-----	Black mast.	1895 1913

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LITTLE RAPIDS CUT</b>					
1169	Little Rapids Cut Lighted Buoy 85. Fl. G., 4 sec.	In 25 feet.	At turn in channel.	Pier 10	
1170	Little Rapids Cut Lighted Buoy 87. Qk. Fl. G.	In 30 feet.	Marks inside of turn.	10	
1171	Little Rapids Cut Lighted Buoy 88. Fl. R., 4 sec.	In 25 feet.	Marks outside of turn.	10	
<b>BAYFIELD CHANNEL</b>					
1172	BAYFIELD ROCK RANGE FRONT. F. W.	On northwest end of Sugar Island.		18	
1173	BAYFIELD ROCK RANGE REAR. F. W.	46 29.3 84 17.0 045 feet 109° from front light.		34	
1174	Bayfield Channel Lighted Buoy 89. Fl. G., 4 sec.	In 25 feet.		10	
1175	BAYFIELD CHANNEL DIKE. Qk. Fl. R.	On dike.	C. 46 29.9 84 18.9	25	
1176	Bayfield Channel Lighted Buoy 92. Fl. R., 4 sec.	In 25 feet, on north channel bank.		8	7
<b>AMERICAN CANAL</b>					
1177	EAST CENTER PIER RANGE FRONT. F. R.	On pierhead, at east entrance to canal.		20	
1178	EAST CENTER PIER RANGE REAR. F. W. F. R.	105 feet 273½° from front light.		35 30	
1179	NORTHEAST PIERHEAD. F. R.	On southeast corner of pierhead, east entrance to north canal.		21	
1180	WEST CENTER PIERHEAD. F. R.	On pierhead, west entrance to canal.		20	
1181	SOUTHWEST PIER. Qk. Fl. W.	On pier, 1,000 feet eastward of pierhead.		8	
1182	SOUTHWEST PIERHEAD. F. R.	On pierheads, at west entrance to canal.		20	
1183	NORTHWEST PIERHEAD. F. R.		20		
<b>VIDAL SHOALS CHANNEL</b>					
1184	VIDAL SHOALS CHANNEL RANGE FRONT. U. Occ. R., 3 sec.	On north pier, west of International Bridge.		62	
1185	VIDAL SHOALS CHANNEL RANGE REAR. U. F. R.	On dike, 2,700 feet 76° from front light.		98	

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt Year
1169	20 200 mm a	Flash 0.4 sec.	Feet Black. Spar station buoy.	Year
1170	30 200 mm e	75 flashes per minute.	Black. Spar station buoy.	
1171	30 200 mm e	Flash 0.4 sec.	Red. Spar station buoy.	
1172	30,000 Rf e		White octagonal pyramidal tower.	1892 1913
1173	30,000 Rf e		White octagonal pyramidal tower.	1892 1913
1174	20 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1175		60 flashes per minute.	Pole.	1944
1176	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1177	e	Marks direction of pier. Maintained by U. S. Engineers.	Concrete column.	1913
1178	e	Marks direction of pier. Maintained by U. S. Engineers.	Concrete column.	1913
1179	e	Maintained by U. S. Engineers.	Concrete column.	1913
1180	e	Maintained by U. S. Engineers.	Concrete column.	1899 1923
1181	e	60 flashes per minute. Maintained by U. S. Engineers.		1946
1182	e	Maintained by U. S. Engineers.	Concrete column.	1899 1923
1183	e	SIREN, answers signals. Maintained by U. S. Engineers.	Concrete column.	1899 1923
1184	1,500 Rf e	Light 2 sec., eclipse 1 sec. Light displayed continuously.	White daymark on black skeleton tower on concrete pier. White oval daymark 855 feet 265° from tower.	1899 1915
1185	1,500 Rf e		White daymark on black skeleton tower on concrete pier.	1899 1950

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>VIDAL SHOALS CHANNEL</b>					
1186	Vidal Shoals Channel Lighted Buoy 2. Fl. R., 4 sec.	In 26 feet		10	
1187	Vidal Shoals Channel Lighted Buoy 5. Fl. W., 4 sec.	In 26 feet, on south side of channel.		10	
1188	Big Point Lighted Buoy 9. Fl. W., 4 sec.	In 38 feet		10	
<b>CANADIAN CHANNEL</b>					
1189	Lower Entrance Lighted Buoy. Fl. W.	At lower entrance to Canadian Canal, 950 feet 142° from outer end of south pier. C.			
1190	CANADIAN CANAL LOWER ENTRANCE RANGE FRONT. F. R.	On shore of bay north of entrance. C.		40	2
1191	CANADIAN CANAL LOWER ENTRANCE RANGE REAR. F. R.	46 30.0	84 20.8	63	2
1192	CANADIAN CANAL UPPER ENTRANCE RANGE FRONT. F. R.	675 feet	321½° from front light. C.	34	2
1193	CANADIAN CANAL UPPER ENTRANCE RANGE REAR. F. R.	On pier, 500 feet east of Commercial dock. C.		65	2
1194	Upper Turning Lighted Buoy. Fl. W.	48 30.9	84 22.4		2
1195	Vidal Shoals E. Lighted Buoy. Fl. R.	1,264 feet 51° from front light. C.			
1196	Vidal Shoals S. E. Lighted Buoy. Fl. W.	On south edge of turn, 1,350 feet west of west end of south entrance pier of Canadian Canal. C.			
1197	Vidal Shoals W. Lighted Buoy. Fl. R.	On north edge of Canadian channel, at lower end of shoals. C.			1
1198	Vidal Shoals S. W. Lighted Buoy. Gk. Fl. G.	On south edge of Canadian channel, at lower end of shoals. C.			
1199	Vidal Shoals S. W. Lighted Buoy. Gk. Fl. G.	On west end of shoals, north edge of Canadian channel. C.			
1200	Vidal Shoals S. W. Lighted Buoy. Gk. Fl. G.	On west end of shoal, south edge of Canadian channel, at junction with U. S. channel. C.			
<b>POINTE AUX PINS RANGE</b>					
1199	POINTE AUX PINS RANGE FRONT. F. W.	On north end of island off point. C.		28	5
1200	POINTE AUX PINS RANGE REAR. F. W.	46 28.1	84 28.4	53	5
		On point 020 feet 232½° from front light. C.			

<sup>1</sup> The Canadian Canal and its approach are illuminated by two rows of arc lights, one on each side of the canal; the most easterly and the most westerly in each row are green lights; all of the other lights are white.

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1186	30 200 mm a	Flash 0.4 sec.	Feet Red.	Spar station buoy. Year
1187	110 200 mm a	Flash 0.4 sec.	Black.	Spar station buoy.
1188	110 200 mm a	Flash 0.4 sec.	Black.	Spar station buoy.
1189			Black.	
1190			Orange conical daymark on lattice poles.	1896 1942
1191		Radio station east of town, call VBB. Storm signal 100 feet south of Canadian locks.	Orange diamond daymark on gray square skeleton tower.	62 1896 1904
1192			Orange box on gray square skeleton tower, white conical daymark at base.	1896 1910
1193			Orange conical daymark and box in framework of gray square skeleton tower.	1896 1909
1194			Black.	
1195			Red.	
1196			Black.	
1197		Radar Reflector.	Red.	
1198			Red and black horizontal bands.	
1199			White square tower, red lantern roof.	1903
1200			White square tower, red lantern roof.	1903
			56	

## ST. MARYS RIVER

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>POINTE AUX PINS RANGE</b>					
1205	<i>Pointe aux Pins Channel Lighted Buoy 18.</i> Fl. R., 4 sec.	In 25 feet.....		10	
1201	<i>Brush Point Lighted Bell Buoy 17.</i> Fl. W., 4 sec.	In 25 feet, off point.....		10	
1202	<b>BRUSH POINT FOG BELL</b> .....	Adjacent to Coast Guard station 6.			
<b>POINTE AUX PINS TO ROUND ISLAND</b>					
1204	<b>Pointe aux Pins, Main</b> ..... F. R.	On outer end of low sand point. 46 27.9                      84 28.4	C.	30	7
1205	<i>Brush Point Lighted Buoy 21.</i> Fl. W., 4 sec.	In 25 feet. Marks turn.....		10	
1206	<i>Pointe aux Pins Lighted Buoy 22.</i> Fl. R., 4 sec.	In 24 feet, off Point Louise.....		10	
1207	<b>BRUSH POINT RANGE FRONT</b> ..... Fl. W., 1 sec. Fl. W., 5 sec.	In 10 feet, 120 feet south from obchannel bank. 46 27.7                      84 28.2	U.	33 18	
1208	<b>BRUSH POINT RANGE REAR</b> ..... F. W.	3,780 feet 74° from front light.	U.	66	
1209	<i>Cedar Point Lighted Buoy 27.</i> Fl. W., 4 sec.	In 23 feet, on south edge of dredged channel.		10	
1210	<i>Cedar Point Lighted Buoy 28.</i> Fl. R., 4 sec.	In 28 feet. North of Cedar Point.		10	
1211	<i>Cedar Point Bell Buoy 29.</i>	In 25 feet.....			
1212	<i>Round Island Lighted Buoy 31.</i> Fl. G., 4 sec.	In 27 feet.....		10	
1213	<i>Round Island Lighted Bell Buoy 32.</i> Gk. Fl. R.	In 27 feet. ¼ mile north-west of Round Island.		13	
<b>ROUND ISLAND TO WHITEFISH BAY</b>					
1214	<b>BIRCH POINT RANGE FRONT</b> ..... F. W.	On mainland..... 46 28.0                      84 31.4	U.	53	
1215	<b>BIRCH POINT RANGE REAR</b> ..... F. W.	970 feet 189½° from front light.	U.	78	
1216	<i>Round Island Traffic Lighted Gong Buoy.</i> S-L. Fl. W.	In 27 feet. Vessels are required to leave buoy on port hand in passing.		13	10
1217	<i>Round Island Lighted Buoy 33.</i> Fl. R., 4 sec.	In 40 feet, marks turn to Birch Point Range.		10	
1218	<i>Point Iroquois Shoal Lighted Bell Buoy 39.</i> Fl. W., 4 sec.	In 45 feet.....		13	

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Luminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1205	30 200 mm e	Flash 0.4 sec.....	Feet Red.	Spar station buoy. 1873
1201	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.		Black. Spar station buoy.
1202		BELL, hand, answers signals.		Black skeleton framework.
1204		BELL, 1 stroke every 8 sec..		White, square, wood; red lantern. 1887 23
1205	110 200 mm a	Flash 0.4 sec.....		Black. Spar station buoy.
1206	30 200 mm a	Flash 0.4 sec.....		Red. Spar station buoy.
1207	3,500 350 mm a 110 200 mm a	Flash 0.3 sec. Range lights are displayed continuously. Flash 0.5 sec. Visible from 63½° to 211°.		White square pyramidal tower on concrete pier. 1887 1933
1208	4,500 350 mm a			White rectangular daymark on steel tower. 1887 57 1933
1209	110 200 mm a	Flash 0.4 sec.....		Black. Spar station buoy.
1210	30 200 mm a	Flash 0.4 sec.....		Red. Spar station buoy.
1211		BELL, on buoy. White reflector.		Black. Spar station buoy.
1212	20 200 mm a	Flash 0.4 sec.....		Black. Spar station buoy.
1213	30 200 mm e	75 flashes per minute. BELL, on buoy. Radar Reflector.		Red. Nun station buoy.
1214	40,000 Rf e	Range lights are displayed continuously.		White triangle on orange daymark on black skeleton tower. 1901 51
1215	40,000 Rf e			White triangle on orange daymark on black skeleton tower. 1901 75
1216	140 200 mm e	A short flash and a long flash. GONG, on buoy.		Black and white vertical stripes.
1217	30 200 mm a	Flash 0.4 sec.....		Red. Spar station buoy.
1218	140 200 mm e	Flash 0.4 sec..... BELL, on buoy.		Black. Spar station buoy.

## ST. MARYS RIVER AND LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
	<b>ROUND ISLAND TO WHITEFISH BAY</b>			Feet	
1219	<i>Point Iroquois Shoal Lighted Bell Buoy 45.</i> Fl. W., 4 sec.	In 26 feet.....		13	
1220	<i>Point Iroquois</i> Fl. W., 6 sec.	On point..... 46 29.1	84 37.9	73	16
1221	<b>GROS CAP REEFS LIGHT- SHIP.</b> Fl. W., 9 sec. Radiobeacon. Distance-Finding Station.	In 36 feet, 2,450 feet north- west of 15-foot spot. C. 46 31.1	84 37.6	35	7
	<b>LAKE SUPERIOR SOUTH SIDE</b>				
1222	<i>Whitefish Point</i> Fl. W., 20 sec. Radiobeacon. Distance-Finding Station.	On point..... 46 46.3	84 57.4	76	17
1223	<i>Whitefish Point Lighted Bell Buoy 1.</i> Fl. W., 4 sec.	In 33 feet, off point.....		10	9
1224	<i>Crisp Point</i> Fl. W., 8 sec. U.	On mainland..... 46 45.2	85 15.3	62	15
1225	<b>GRAND MARAIS HARBOR OF REFUGE OUTER.</b> U. Fl. R., 2.5 sec.	On outer end of pier..... 46 40.8	85 58.4	40	13
1226	<b>GRAND MARAIS HARBOR OF REFUGE INNER.</b> F. R.	1,770 feet 178½° from outer light.		54	10

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
			Feet	Year
1219	140 200 mm e	Flash 0.4 sec..... BELL, on buoy. Radar Reflector.	Black.	Can station buoy.
1220	80,000 4 e	Flash 0.8 sec., eclipse 5.2 sec. DIAPHONE, air; blast 2 sec., silent 28 sec.	White conical brick tower, dwelling attached.	1855 62 1871
1221	-----	Flash 4 sec., eclipse 5 sec. Fixed white light will be shown if flashing light in- operative. TYFON, steam; blast 10 sec., silent 50 sec. RADIOBEACON: Transmits on 308 kc., 3 groups of 4 dots (••••) followed by 2 long dashes.	Red hull, GROS CAP REEFS No. 22 on sides; two masts; red ball near top of foremast. Ball will be lowered if ship is off sta- tion. DISTANCE-FINDING STA- TION: For method of oper- ation see p. 11.	
1222	700,000 3½ e	Flash 0.5 sec., eclipse 19.5 sec. Light displayed one hour before sunset to one hour after sunrise and when sound signal is in operation. DIAPHONE, two-tone, air; group of 2 blasts every 30 sec.; blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec. RADIOBEACON: Transmits on 286 kc., groups of 3 dashes, 1 dot (---•---). Antenna lead-in at light tower.	White skeleton tower; in- closed stair cylinder; dwell- ing attached.	1849 80 1861
1223	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Telephone and radiotelephone, via Coast Guard Base, Sault Ste. Marie, Mich.	
1224	10,000 4 e	Flash 2 sec.....	DISTANCE-FINDING STA- TION. For method of oper- ation see p. 11. Storm warning signals shown here.	
1225	600 375 mm e	Flash 0.5 sec..... HORN, diaphragm, air; blast 2 sec., silent 13 sec.	Black. Spar station buoy.	
1226	1,100 5 e	-----	White square pyramidal skeleton tower, upper part inclosed.	1904 58 1895 1927 1898
			Telephone and radiotele- phone via Coast Guard Station. Storm warning signals shown daytime only at Coast Guard Station.	

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
1227	Au Sable..... Gp. Fl. W., 10 sec. 2 flashes.	On point..... 46 40.3	86 08.4	107	19
1228	Grand Island..... Fl. W., 10 sec.	On northwest point..... U. 46 33.7	86 40.9	205	18
1229	Trout Point Lighted Bell Buoy S. Fl. R., 4 sec.	In 45 feet.....		11	
1230	Sand Point Lighted Bell Buoy I. Fl. W., 4 sec.	In 21 feet, on northwest edge of shoal.		10	9
1231	MUNISING RANGE FRONT..... F. R.	In town of Munising..... 46 24.9	86 30.7	79	17
1232	MUNISING RANGE REAR..... F. R.	1,150 feet 217° from front light.		107	10
1233	GRAND ISLAND HARBOR RANGE FRONT. U. F. W.	On west side of entrance to harbor. 46 26.3	86 41.5	23	11
1234	GRAND ISLAND HARBOR RANGE REAR. U. F. W.	750 feet 164½° from front light.		72	16
1235	Grand Island Harbor West Entrance Lighted Bell Buoy. S-L. Fl. W.	In 54 feet, off south end of Grand Island.		10	9
1236	Marquette..... Fl. W., 10 sec. Radiobeacon. Distance-Finding Station.	On north point..... 46 32.8	87 22.6	77	17
1237	MARQUETTE BREAKWATER OUTER. U. Occ. E., 3 sec.	At outer end of breakwater..		40	13
1238	MARQUETTE BREAKWATER INNER. U. F. B.	At elbow of breakwater, 1,500 feet from end.		35	

## MICHIGAN

No.	Candlepower Apparatus luminant	Light characteris/tic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1227	17,000 3 e	Flash 2 sec., eclipse 1.5 sec., flash 2 sec., eobpse 4.5 sec. DIAPHONE, air; group of 2 blasts every 30 sec., blast 1.5 sec., silent 1.5 sec., blast 1.5 sec., silent 25.5 sec.	Feet White conical tower, dwelling attached.	Year red 1873
1228	1,700 4 a	Flash 1 sec., eclipse 9 sec.	White square tower on brick dwelling.	1856 1867
1229	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1230	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Black. Spar station buoy.	
1231	20,000 Rf e		White conical steel tower. 58	1909
1232	20,000 Rf e		White conical steel tower. 33	1909
1233	6,000 Rg e		Storm warning signals shown at inner end of City Dock. White daymark on mast. Lank house alongside.	1868 1890
1234	6,000 Rg e		Black conical tower, upper part white; black lantern; on concrete pier.	1868 1913
1235	110 200 mm a	A short flash and a long flash. BELL, on buoy.	Black and white vertical stripes. Spar station buoy.	
1236	400,000 e	Flash 0.5 sec., eclipse 9.5 sec. DIAPHONE, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 302 kc, groups of 1 dot, 2 dashes (• — — —). An- tenna lead-in 300 feet 109° from lighthouse.	Red square tower on dwell- ing. 40	1855 1867
1237	2,500 4 e	Light 2 sec., eclipse 1 sec..... DIAPHONE, air; blast 1 sec., silent 14 sec.	White square pyramidal skel- eton tower, upper part en- closed.	1875 1903
1238	300 200 mm e		Black skeleton tower.	1927 1948

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
1239	<b>PRESQUE ISLE HARBOR BREAKWATER.</b> U. Gp. Fl. R., 10 sec., 3 flashes. Marker Radiobeacon.	On breakwater, 60 feet from outer end. 48 34.4                      87 22.4		<i>Fast</i> 56	15
1240	<i>Presque Isle Harbor Lighted Buoy I.</i> Fl. W., 4 sec.	In 28 feet, on north point of shoal off Pioneer Iron Works.		13	-----
1241	<b>Granite Island</b> ----- Fl. W., 4 sec.                      U.	On island----- 48 43.3                      87 24.7		89	13
1242	<b>Big Bay Point</b> ----- Fl. W., 10 sec.                      U.	On point----- 46 50.5                      87 40.8		105	16
1243	<b>Stannard Rock</b> ----- Fl. W., 15 sec.	On north end of reef----- 47 11.0                      87 18.5		102	18
1244	<b>Huron Island</b> ----- Gp. Fl. W., 10 sec. 2 flashes. Radiobeacon. Distance-Finding Station.	On northeast side of island----- 46 57.8                      87 59.9		107	24
1245	<i>Point Abbaye Shoal Bell Buoy 8.</i> <b>HURON BAY</b> ----- Fl. W., 4 sec.                      U.	In 28 feet-----		80	7
<b>KEWEENAW BAY</b>					
1246	<b>SAND POINT</b> ----- Fl. W., 4 sec.                      U.	2,110 feet north of point----- 46 47.1                      88 28.0		35	11
<b>KEWEENAW WATERWAY</b>					
1249	<b>Keweenaw Lower Entrance</b> ----- Occ. W., 3 sec.	On outer end of breakwater, at entrance to waterway. 46 58.2                      88 25.9		68	16

## MICHIGAN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1239	2,500 375 mm e	Flash 1 sec., eclipse 1 sec., flash 1 sec., eclipse 1 sec., flash 1 sec., eclipse 5 sec. HORN, diaphragm, air; blast 1.5 sec., silent 1 sec., blast 1.5 sec., silent 16 sec. RADIOBEACON: Transmits on 310 kc, a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	<i>Fast</i> White cylindrical tower on white octagonal building. 40	<i>Year</i> 1941
1240	110 200 mm a	Flash 0.4 sec.-----	Black.	Spar station buoy.
1241	400 375 mm a	Flash 0.4 sec.----- Winter light shows station characteristic.	Gray square granite tower on dwelling. 89	1869
1242	1,000 3 a	Flash 1 sec., eclipse 9 sec.---	White square tower on dwell- ing. 64	1896
1243	140,000 2 a 110 200 mm a	Flash 2.5 sec., eclipse 12.5 sec. Winter light, shows station characteristic. DIAPHONE, air; group of 2 blasts every 30 sec.; blast 2 sec., silent 2 sec., blast 2 sec., silent 24 sec.	Gray conical stone tower on cylindrical pier. 1882	1882
1244	20,000 3 1/4 e 140 200 mm e	Flash 1 sec., eclipse 2 sec., flash 1 sec., eclipse 6 sec. Winter light, Fl. W. 10 sec., flash 1 sec. DIAPHONE, air; group of 3 blasts every 60 sec., 3 blasts 2 sec. each, 2 silences 2 sec. each, 1 silence 50 sec. 1,750 feet 309° from lighthouse. RADIOBEACON: Transmits on 314 kc, groups of dash, dot, dash (--- • ---). An- tenna lead-in 1,750 feet 309° from lighthouse.	Gray granite tower on dwell- ing. 39	1877
1245	20 160 mm a	Flash 0.4 sec., visible from 32° to 230°.	Radiotelephone at this sta- tion.	1896
1246	170 300 mm a	Flash 0.4 sec.-----	DISTANCE-FINDING STA- TION, For method of operation see p. 11.	1910
1249	7,500 4 e	Light 2 sec., eclipse 1 sec.--- DIAPHONE, air; blast 3 sec., silent 27 sec.	Black, white reflector.	1910 1936
1246	170 300 mm a	Flash 0.4 sec.-----	White square tower.	1910 1936
1246	170 300 mm a	Flash 0.4 sec.-----	Red mast on brick tank house. 1878 1922	1878 1922
1249	7,500 4 e	Light 2 sec., eclipse 1 sec.--- DIAPHONE, air; blast 3 sec., silent 27 sec.	White octagonal tower; on concrete pierhead. Telephone at this station.	1856 1920

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>KEWEENAW WATERWAY</b>					
1250	<i>Keweenaw Waterway Lighted Buoy 1.</i> Fl. G., 4 sec.	In 25 feet west side of entrance to waterway.		18	Feet
1251	<i>Keweenaw Waterway Lighted Buoy 6.</i> Fl. G., 4 sec.	In 25 feet, on west side of channel.		18	
1252	KEWEENAW WATERWAY 8... Fl. R., 2.5 sec. U.	On north end of east pier....		15	
1253	KEWEENAW WATERWAY 9... Fl. W 2.5 sec. U.	In 7 feet, on west side of channel.		14	
1254	KEWEENAW WATERWAY 11... Fl. G., 2.5 sec. U.	On south end west of pier....		16	
1255	KEWEENAW WATERWAY 13... Fl. G., 2.5 sec. U.	On north end of west pier....		16	
1256	KEWEENAW WATERWAY 14... Fl. R., 2.5 sec. U.	In 16 feet, on east side of channel.		14	
1257	KEWEENAW WATERWAY 15... Fl. G., 2.5 sec. U.	In 9 feet, on west side of channel.		13	
1258	KEWEENAW WATERWAY 17... Gk. Fl. G. U.	In 16 feet, on west side of channel.		14	
1259	KEWEENAW WATERWAY SOUTH RANGE FRONT 16. U. Fl. W., 1 sec. U. Fl. W., 1 sec. U.	On east side of channel....		30	
1260	KEWEENAW WATERWAY SOUTH RANGE REAR. U. F. W.	1,600 feet 136° from front light.		55	
1261	KEWEENAW WATERWAY 19... Fl. G., 2.5 sec. U.	In 23 feet, on westerly side of channel.		14	
1262	KEWEENAW WATERWAY 21... Fl. G., 2.5 sec. U.	In 5 feet, on westerly side of channel.		14	
1263	KEWEENAW WATERWAY 20... Fl. R., 2.5 sec. U.	In 5 feet, on easterly side of channel.		14	
1264	KEWEENAW WATERWAY 23... Fl. G., 2.5 sec. U.	In 5 feet, on westerly side of channel.		14	
1265	KEWEENAW WATERWAY 22... Fl. R., 2.5 sec. U.	In 5 feet, on easterly side of channel.		14	
1266	KEWEENAW WATERWAY 24... Gk. Fl. R. U.	In 5 feet, on easterly side of channel at turn.		14	
1267	PRINCESS POINT RANGE FRONT. U. Occ. W., 2 sec. Occ. W., 2 sec.	On west side of channel, on axis of cut in south end of Portage Lake.		35	
1268	PRINCESS POINT RANGE REAR. U. F. W.	1,100 feet 164½° from front light.		55	
1269	KEWEENAW WATERWAY 26... Fl. R., 2.5 sec. U.	In 6 feet, on east side of channel.		13	
1270	KEWEENAW WATERWAY 29... Fl. G., 2.5 sec. U.	In 4 feet, on west side of channel.		15	
1271	<i>Keweenaw Waterway Lighted Buoy 31.</i> Gk. Fl. G.	In 23 feet, on west side of north end of cut.		13	
1272	<i>Keweenaw Waterway Lighted Buoy 33.</i> Fl. W., 4 sec.	In 30 feet, at north entrance to waterway.		13	

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1250	30 200 mm e	Flash 0.4 sec.....	Feet Black.	Spar station buoy. Year
1251	30 200 mm e	Flash 0.4 sec.....	Black.	Spar station buoy.
1252	150 150 mm e	Flash 0.5 sec.....	Red skeleton tower.	1913
1253	300 200 mm e	Flash 0.5 sec.....	White pipe.	1920 1940
1254	50 200 mm e	Flash 0.5 sec.....	Black skeleton tower.	1920
1255	50 200 mm e	Flash 0.5 sec.....	Black skeleton tower.	1920
1256	70 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1257	50 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1258	50 200 mm e	60 flashes per minute.....	White pipe.	1940
1259	1,000 Rg e 300 200 mm e	Flash 0.25 sec. Visible on range line only. Visible around horizon.	White daymark on white tower.	1897 1940
1260	1,000 Rg e	.....	White daymark on white tower.	1897
1261	50 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1262	50 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1263	50 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1264	50 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1265	70 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1266	70 200 mm e	60 flashes per minute.....	White pipe.	1940
1267	1,000 Rg e 300 200 mm e	Light 1 sec., eclipse 1 sec. Visible on range line only. Visible around horizon.	White daymark on white tower.	1923 1940
1268	1,000 Rg e	.....	White daymark on white tower.	1923 1940
1269	70 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1270	50 200 mm e	Flash 0.5 sec.....	White pipe.	1940
1271	30 200 mm e	75 flashes per minute.....	Black.	Spar station buoy.
1272	140 200 mm e	Flash 0.4 sec.....	Black.	Spar station buoy.



## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>PORTAGE LAKE</b>					
1273	Torch Bay Entrance Lighted Buoy 1. Fl. W., 4 sec.	In 20 feet, on southeast end of Middle Ground, north side of entrance to bay.		Feet 10	
1274	PILGRIM POINT Fl. W., 4 sec. U.	On east edge of shoal. 47 08.4	88 30.4	20	
1275	Colege of Mines Lighted Buoy 41. Fl. G., 4 sec.	In 20 feet		10	
1276	OSCEOLA POINT F. E. U.	On north shore 47 07.4	88 35.6	12	
1277	ATLANTIC POINT F. G. U.	On south shore		8	
1278	Grass Island Lighted Buoy 48. Fl. R., 4 sec.	In 25 feet, opposite Cole Creek Light.		10	
1279	COLE CREEK F. G. U.	On southwest shore		15	
1280	HARRINGTON ISLAND F. G. U.	Off east side of island		25	
1281	High Point Lighted Buoy 54. Fl. R., 4 sec.	In 25 feet, off point		8	
1282	ROULEAU POINT RANGE FRONT. F. W. U.	In 6 feet, on axis of Lily Pond Lower Canal. 47 11.6	88 37.1	22	
1283	ROULEAU POINT RANGE REAR. F. W. U.	1,280 feet 33¼° from front light.		46	
1284	LILY POND RANGE FRONT. F. E. U.	On east pier 47 12.0	88 37.1	28	
1285	LILY POND RANGE REAR. F. E. U.	525 feet 14° from front light		35	
1286	LILY POND SOUTH F. E. U.	On south end of east revetment.		12	
1287	LILY POND NORTH F. E. U.	On north end of east revetment.		12	
<b>SOUTH SIDE</b>					
1288	TRAVERSE RIVER F. W. U.	On outer end of south pier. 47 11.4	88 14.2	17	10
1289	MENNOTA Fl. W., 10 sec. U.	On south side of entrance to Lac la Belle. 47 22.4	87 58.0	50	13

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1273	110 200 mm e	Flash 0.4 sec.	Feet Black. Spar station buoy.	Year 1897
1274	170 300 mm a	Flash 0.4 sec.	White mast on hexagonal tank house on pier.	1897 1916
1275	20 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1276	80 150 mm e		White skeleton tower.	1897 1942
1277	60 150 mm e		Storm warning signals shown on roof of Masonic Temple, Houghton.	
1278	30 200 mm a	Flash 0.4 sec.	White skeleton tower.	1897 1934
1279	60 150 mm e		Red. Spar station buoy.	
1280	200 200 mm e		White tower on pile cluster.	1900 1940
1281	30 200 mm a	Flash 0.4 sec.	White skeleton tower.	1900
1282	1,200 Rg e	Also serves as a leading light for Lily Pond Lower Canal.	Red diamond center on white diamond field daymark on red skeleton tower.	1897 1937
1283	1,200 Rg e		Red rectangular center on a white rectangular field daymark on black skeleton tower.	1897 1937
1284	500 Rg e		White diamond daymark on black skeleton tower.	1894 1922
1285	500 Rg e		White diamond daymark on black skeleton tower.	1894 1937
1286	90 200 mm e		White skeleton tower.	1903
1287	90 200 mm e		White skeleton tower.	1903
1288	1,300 200 mm e		Post.	1940 1949
1289	460 375 mm a	Flash 1 sec.	Black square skeleton tower.	1870 1933

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
1200	Manitou..... Fl. W., 10 sec. Radiobeacon. Distance-Finding Station.	On east point of Manitou Island. 47 25.2	87 35.2	81	17
1201	GULL ROCK..... Fl. R., 4 sec.	On rock..... U. 47 25.0	87 39.8	50	10
1202	Keweenaw Point Lighted Buoy 1. Fl. W., 4 sec.	In 30 feet.....		10	9
1203	COPPER HARBOR..... Fl. W., 4 sec.	On east point of entrance to harbor. U. 47 23.5	87 51.6	90	15
1204	COPPER HARBOR RANGE FRONT. P. W.	On south shore of harbor. U.		22	11
1205	COPPER HARBOR RANGE REAR. P. W.	470 feet 100½° from front light. U.		39	13
1208	Eagle Harbor. Occ. W., Fl. Alt. W. and R., 120 sec. Radiobeacon. Distance-Finding Station.	On north point..... 47 27.7	88 09.5	60	15
1207	EAGLE HARBOR RANGE FRONT. P. G.	On south side of harbor. U. 47 27.3	88 09.1		
1208	EAGLE HARBOR RANGE REAR. P. G.	1,070 feet 150° from front light. U.			
1209	Sand Hills..... Fl. W., 10 sec.	On point 3¼ miles west of Eagle River. U. 47 23.5	88 22.2	93	11

## MICHIGAN

No.	Candlepower Apparatus Diluminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1200	120,000 3 e	Flash 0.8 sec., eclipse 0.2 sec. Light displayed 1 hour before sunset to 1 hour after sunrise.	Feet 80	Year 1850
	110 200 mm a	Winter light, shows station characteristic. DIAPHONE, air; groups of 2 blasts every 30 sec., blast 2 sec., silent 2 sec., blast 2 sec., silent 24 sec. RADIOBEACON: Transmits on 302 kc, groups of 2 dashes (---). Antenna lead-in 144 feet 238° from light tower.		Telephone via Eagle Harbor Coast Guard Station; and radiotelephone at this station.
				DISTANCE-FINDING STATION. For method of operation, see p. 11.
1201	170 4 a	Flash 0.4 sec.....		Yellow square brick tower on dwelling. 46
1202	110 200 mm a	Flash 0.4 sec.....		Black. Spar station buoy. 1867
1203	1,100 300 mm e	Flash 0.4 sec.....		White square skeleton tower near white dwelling. 1849 62
1204	11,000 Rg e			Black daymark on white tower on red tankhouse. 22
1205	11,000 Rg e			Black daymark on white lantern on dwelling. 1865 32
1206	W. 10,000 W. 110,000 R. 35,000 4 e	White light 40 sec., eclipse 0.25 sec., white flash 1.5 sec., eclipse 0.25 sec., white light 40 sec., eclipse 0.25 sec., red flash 1.5 sec., eclipse 0.25 sec. DIAPHONE, air; group of 2 blasts; blast 3 sec., silent 3 sec., blast 3 sec., silent 51 sec. RADIOBEACON: Transmits on 314 kc, groups of 1 dot, 3 dashes (• ---). Antenna lead-in 160 feet 263° from lighthouse.		White octagonal brick tower on red brick dwelling. 1851 44
1207	3,000 Rg e			DISTANCE-FINDING STATION. For method of operation, see p. 11. Storm warning signals shown NW of station. White octagonal tower. 1939
1208	3,000 Rg e			White daymark on post. 1939
1209	170 300 mm a	Flash 1 sec.....		Buff brick square tower on dwelling. 1919 1943

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
1300	Keweenaw Upper Entrance... Fl. W., 15 sec. Radiobeacon.	On outer end of east break- water. 47 14.1                      88 37.8		82	17
1301	KEWEENAW UPPER EN- TRANCE WEST BREAK- WATER. Fl. R., 4 sec. U.	On outer end..... 47 14.0                      88 37.9		32	10
1302	KEWEENAW UPPER EN- TRANCE EAST REVETMENT. F. W. U.	On inner east pier..... 47 13.6                      88 37.5		26	12
1303	KEWEENAW UPPER EN- TRANCE WEST REVETMENT. Fl. W., 4 sec. U.	On inner west pier..... 47 13.6                      88 37.6		32	10
1304	Fourteen-Mile Point..... Fl. W., 10 sec. U.	On point..... 46 59.6                      89 07.6		60	12
1305	ONTONAGON PIERHEAD..... Fl. R., 8 sec.	On west pier at entrance to Ontonagon Harbor. 46 52.8                      89 19.9		31	12
1306	ONTONAGON..... F. R..	On west bank of Ontonagon River.		44	14
1307	BLACK RIVER HARBOR EN- TRANCE. F. W. U.	On east side of entrance to river.		12	-----
1308	Outer Island..... Fl. W., 45 sec.	On north point of island..... 47 04.6                      90 25.0		180	20
1309	GULL ISLAND..... Fl. W., 10 sec. U.	On middle of island..... 46 54.5                      90 26.5		55	13
1310	Michigan Island..... Fl. W., 5 sec. U.	On south point of island..... 46 52.3                      90 20.8		170	22
1310.5	Madeline Island Lighted Bell Buoy 2A. Fl. R., 4 sec.	In 54 feet, 2½ miles 50° from La Point Light.		11	-----

## MICHIGAN AND WISCONSIN

No.	Candlepower Apparatus Fluoriant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1300	500,000 Di e	Flash 1 sec., eclipse 14 sec....	Feet White square tower on cy- lindrical base. 50	Year 1874 1950
1301	150 200 mm e	DIAPHONE, air; blast 2 sec., silent 18 sec. 2,600 feet 175¼° from light, on west side of channel. RADIOBEACON: Transmits on 294 kc, groups of dash, dot, dash, dot (--- e --- e). Antenna lead-in 2,600 feet 175¼° from light, on west side of channel. Flash 0.4 sec.....	Storm warning signals shown on east side of entrance to waterway.	White skeleton tower. 1902 1949
1302	300 200 mm e	Flash 0.4 sec.....	White skeleton tower.	1875 1941
1303	140 200 mm e	Flash 0.4 sec.....	White skeleton tower.	1949
1304	250 300 mm a	Flash 1 sec.....	White lantern; red square tower rising from center of dwelling. 55	1894
1305	1,500 4 o	Flash 2 sec., eclipse 4 sec.... SIREN, electric; blast, 3 sec., silent 27 sec.	White skeleton tower, upper part enclosed.	1875 1900
1306	1,800 5 e	Maintained by Gogebic County Road and Park Commission.	Telephone at this station. Yellow square tower on dwelling. 45	1852 1866
1307	60 Pi o	Flash 1 sec.....	Storm warning signals shown daytime only at light sta- tion.	1930
1308	140,000 3 e	Flash 5.2 sec., eclipse 39.8 sec. DIAPHONE, air; group of 2 blasts every 60 sec., blast 3 sec., silent 2 sec., blast 3 sec., silent 52 sec.	White conical tower, dwell- ing attached. 86	1874
1309	350 375 mm a	Flash 1 sec.....	Radiotelephone at this sta- tion.	Black square skeleton tower. 1929
1310	12,000 3¼ e 110 200 mm a	Flash 1 sec..... Winter light shows station characteristic.	White hexagonal pyramidal skeleton tower. 109	1857 1930
1310.5	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red.	

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
1311	La Pointe..... Fl. W., 5 sec. Radiobeacon. Distance-Finding Station.	On point..... 46 43.7	00 47.1	Fcet 70	16
1312	Maddine Island Lighted Buoy 2. Fl. R., 4 sec.	In 48 feet, marks west end of shoal.		10	7
1313	La Pointe Pierhead..... F. W. U.	On end of pierhead.....		20	11
1314	Bayfield..... F. G. U.	On end of city dock.....		25	11
1315	Chequamegon Point..... Op. Fl. G., 10 sec. 2 flashes.	On end of point..... 46 43.7	90 48.6	39	18
1316	Houghton Point..... Fl. R., 10 sec. U.	South of point.....		49	7
1317	Chequamegon Bay Lighted Bell Buoy 1. Fl. G., 4 sec.	In 30 feet, on west edge of shoal.		12	6
1318	Ashland Breakwater..... Occ. W., 3 sec.	On pierhead..... 46 37.5	90 52.8	65	16
1319	Ashland Ore Docks Lighted Buoy 1. Fl. G., 4 sec.	In 22 feet.....		12	
1320	Ashland Ore Docks Lighted Buoy 3. Fl. G., 4 sec.	In 22 feet.....		10	
1321	Ashland Harbor Lighted Buoy 4. Qk. Fl. R.	In 20 feet.....		10	
1322	Ashland Harbor Lighted Buoy 10. Fl. R., 4 sec.	In 20 feet.....		10	
1323	Soo Line Ore Dock..... Fl. W., 3 sec. U.	In 20 feet on outer end of substructure of old dock.		0	
1324	Red Cliff Point Lighted Buoy 1. Fl. W., 4 sec.	In 42 feet, in West Channel, abreast point.		12	
1324.5	Little Manitowish Island..... Fl. W., 4 sec. U.	Off westerly end of island..... 46 57.7	90 41.2	21	
1325	Raspberry Island..... Occ. W., 5 sec. U.	On southwest point of island..... 46 58.3	90 48.3	77	17

## WISCONSIN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1311	9,000 4 e 110 200 mm a	Flash 2 sec., eclipse 3 sec. . . Winter light Fl. W. 5 sec., flash 0.5 sec. when station is closed. DIAPHONE, air; blast 3 sec., silent 27 sec.  RADIOBEACON: Transmits on 314 kc, groups of 4 dashes (--- --- --- ---). Antenna lead-in 52 feet 71° from lighthouse. Flash 0.4 sec. -----	Feet 67	Year 1839 1897
1312	30 200 mm e	Flash 0.4 sec. -----		Red. Spar station buoy.
1313	500 e	Maintained by the town of La Pointe.		On pole. 1928
1314	200 150 mm e			Black skeleton tower, 1930
1315	800 4 e	Flash 1 sec., eclipse 2 sec., flash 1 sec., eclipse 6 sec. BELL, 1 stroke every 20 sec.		White square pyramidal skel- eton tower, upper part inclosed. 1897
1316	30 200 mm a	Flash 1 sec. -----		White skeleton tower on tank house. 1933
1317	20 200 mm a	Flash 0.4 sec. ----- BELL, on buoy.		Black. Spar station buoy.
1318	1,600 4 e	Light 2 sec., eclipse 1 sec. DIAPHONE, air; blast 1 sec., silent 14 sec.		White octagonal pyramidal tower. 1911 1915
1319	20 200 mm a	Flash 0.4 sec. -----		Telephone at this station. Storm warning signals shown on bay front, foot of Second Avenue West. Black. Spar station buoy.
1320	40 150 mm a	Flash 0.4 sec. -----		Black. Spar station buoy.
1321	5 150 mm a	75 flashes per minute. -----		Red. Spar station buoy.
1322	5 150 mm a	Flash 0.4 sec. -----		Red. Spar station buoy.
1323	30 150 mm a	Flash 0.3 sec. Maintained by M., St. P. & S. Ste. M. Ry. Co.		Pile. 1929
1324	110 200 mm a	Flash 0.4 sec. -----		Black. Spar station buoy.
1324.5	140 200 mm e	Flash 0.4 sec. -----		Pole with battery house.
1325	3,000 5 e	Light 3 sec., eclipse 2 sec. . . BELL; 1 stroke every 15 sec. (CO <sub>2</sub> ).		White square tower on dwell- ing. 1862 46 1906

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH SIDE</b>					
1326	Devils Island..... Alt. Fl. W. and R., 20 sec. Radiobeacon. Distance-Finding Station.	On north end of island..... 47 04.8                      90 43.7		Fed 100	15
1327	York Island Shoals Lighted Bell Buoy 1. Fl. W., 4 sec.	In 30 feet, on west side of shoals.		11	9
1328	Sand Island..... Fl. W., 10 sec.	On north point of island..... 47 00.2                      90 56.2		60	13
1329	CORNUCOPIA EAST PIER..... Fl. G., 2.5 sec.	On end of pier.....		20	10
1330	PORT WING WEST PIER..... Fl. W., 4 sec.	On outer end of pier.....			
<b>DULUTH-SUPERIOR HARBOR</b>					
1331	Superior Entry South Break- water. Occ. W., 10 sec. Radiobeacon.	On outer end of breakwater..... 46 42.6                      92 00.4		70	16
1332	SUPERIOR ENTRY NORTH BREAKWATER. U. Fl. R., 1 sec.	On outer end of breakwater...		70	10
1333	SUPERIOR ENTRY INNER NORTH PIERHEAD. U. Occ. R., 2 sec.	On outer end of inner pier...		30	
1334	SUPERIOR ENTRY INNER SOUTH PIERHEAD. U. Occ. G., 2 sec.	On outer end of inner pier...		30	
1335	SUPERIOR HARBOR BASIN 1... Fl. W., 4 sec.	On inner end of south pier...		36	
1336	Superior Harbor Basin Lighted Buoy 4. Fl. R., 4 sec.	In 25 feet, at north corner of basin.		10	
1337	Alouez Bay Lighted Buoy 3... Fl. W., 4 sec.	In 25 feet, on northeast edge of dredged channel.		10	

## WISCONSIN

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1326	W. 400,000 R. 250,000 3 c	White flash 0.6 sec., eclipse 0.4 sec., red flash 0.6 sec., eclipse 0.4 sec. Lighted from 1 hour before sunset to 1 hour after sunrise. Winter light Fl. W., 5 sec., flash 0.5 sec., eclipse 4.5 sec.	Feet White cylindrical steel tower. 80	Year 1891 1901
	110 200 mm a	DIAPHONE, air; group of 3 blasts every 60 sec. 3 blasts 2 sec. each, 2 silences 2 sec. each, 1 silence 60 sec. RADIOBEACON: Transmits on 286 kc, groups of 3 dashes (--- --- ---). Antenna lead-in 220 feet 341° from lighthouse. Flash 0.4 sec.----- BELL, on buoy.	Radio telephone at this sta- tion.	
1327	110 200 mm a	Flash 0.4 sec.----- BELL, on buoy.	Black. Spar station buoy.	
1328	350 375 mm a	Flash 1 sec.-----	White daymark on square skeleton tower.	1881 1933
1329	250 200 mm c	Flash 0.5 sec.-----	Black skeleton tower, tank house at base.	1930 1913
1330	110 200 mm a	Flash 0.4 sec.-----	Post.	1913 1949
1331	5,500 4 e	Light 5 sec., eclipse 5 sec. ... DIAPHONE, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 308 kc, groups of dash, 2 dots (--- • •). Antenna lead-in at light tower.	Gray cylindrical tower on fog signal building. 1913 Telephone at this station. Storm warning signals shown on outer end of G. N. R. Ore Dock No. 2.	
1332	90 375 mm a	Flash 0.3 sec.-----	White skeleton tower, con- crete base.	1910 1912
1333	15 200 mm a	Light 1 sec., eclipse 1 sec. ...	White skeleton tower, tank house at base.	1912 1912
1334	10 200 mm a	Light 1 sec., eclipse 1 sec. ...	Black skeleton tower tank house at base.	1914 1949
1335	60 200 mm a	Flash 0.4 sec.-----	Black skeleton tower, tank house at base.	1915
1336	30 200 mm a	Flash 0.4 sec.-----	Red. Spar station buoy.	
1337	110 200 mm a	Flash 0.4 sec.-----	Black. Spar station buoy.	

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>DULUTH-SUPERIOR HARBOR</b>					
1338	SUPERIOR FRONT CHANNEL RANGE FRONT. U. F. G. F. G.	4,650 feet 282½° from Superior Harbor Basin Light 1. 46 42.4	92 02.1	41 43	----- -----
1330	SUPERIOR FRONT CHANNEL RANGE REAR. U. F. G.	1,420 feet 136° from front light.		57	-----
1340	Superior Front Channel Lighted Buoy 2. Qk. Fl. R.	In 25 feet, on northeast side of dredged channel.		10	-----
1341	Superior Front Channel Lighted Buoy 6. Fl. R., 4 sec.	In 25 feet, on northeast side of dredged channel.		10	-----
1342	Superior Front Channel Lighted Buoy 10. Fl. R., 4 sec.	In 25 feet.....		10	-----
1343	Superior Front Channel Lighted Buoy 14. Fl. R., 4 sec.	In 25 feet, on northeast side of dredged channel.		10	-----
1344	Superior Front Channel Lighted Buoy 18. Fl. R., 4 sec.	In 25 feet, at junction of Front Channel and East Gate Basin.		10	-----
1345	Superior Front Channel Lighted Buoy 17. Fl. W., 4 sec.	In 25 feet, on southwesterly side of channel.		12	-----
1346	Duluth South Breakwater Outer. F. G. F. G. Radiobeacon. Distance-Finding Station.	On outer end of south pier... 46 46.8	92 05.8	44 43	14 -----
1347	DULUTH SOUTH BREAKWATER INNER. Fl. W., 4 sec.	1,190 feet 245° from preceding.		08	16
1348	DULUTH NORTH PIER..... Occ. W., 4 sec. U.	On outer end of pier.....		46	11
1349	Duluth Harbor Basin Traffic Lighted Buoy. S-L. Fl. W.	In 25 feet, at northern end of basin. Vessels are requested to leave buoy on starboard hand in passing.		10	-----
1350	Duluth Harbor Basin Lighted Buoy 3. Fl. W., 4 sec	In 25 feet, at north angle of basin.		10	-----
1351	Duluth Harbor Basin Lighted Buoy 9. Fl. W., 4 sec.	In 25 feet, at southeast angle of basin.		10	-----
1352	Duluth Harbor Basin Lighted Buoy 11. Fl. W., 4 sec.	In 25 feet.....		10	-----

## WISCONSIN AND MINNESOTA

No.	Candlepower Apparatus Ulluminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1338	19,000 Rf e 140	Visible on range line only... Visible from 90° to 330°... 300 mm e	Red White daymark on skeleton tower.	Year 1934
1330	19,000 Rf e	Visible on range line only... 200 mm a	White daymark on skeleton tower.	1934
1340	30 200 mm a	75 flashes per minute.....	Red. Spar station buoy.	
1341	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1342	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1343	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1344	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1345	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1346	2,500 4 e 140 300 mm e	Lower light of 140 cp. visible only from 8° to 98°. Lighted from 1 hour before sunset to 1 hour after sunrise. DIAPHONE, air; blast 5 sec., silent 55 sec.  RADIOBEACON: Transmits on 308 kc, groups of 3 dashes, 1 dot (--- --- e). Antenna lead-in at light tower.	Buff brick tower on fog-signal building. 35 Telephone at this station. 1901 Storm warning signals shown on southwest side of Weather Bureau Bldg., corner 8th and 7th Avenue West.	1874 1901
1347	50,000 5 e	Flash 0.4 sec., eclipse 3.6 sec. Light displayed 1 hour before sunset to 1 hour after sunrise.	Black square pyramidal skeleton tower, inclosing stair cylinder; lower part of lantern white.	1889 1901
1348	200 5 e	Light 2 sec., eclipse 2 sec....	White cylindrical steel tower.	1910
1349	140 200 mm e	A short flash and a long flash.	Black and white vertical stripes.	
1350	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1351	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1352	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	

## LAKE SUPERIOR

No.	Name Character and period of light	Location Latitude, N. Longitude, W.	Light above low water	Miles seen
<b>DULUTH-SUPERIOR HARBOR</b>				
1353	Rice Point Lighted Buoy 13. Qk. Fl. G.	In 25 feet, on east side of channel at turn.	Feet 13	----
1354	RICE POINT 8. Qk. Fl. R. U.	In 7 feet, on west side of channel, at turn to East Gate Basin.	40	----
1355	RICE POINT RANGE FRONT. F. R. U. F. R.	1,450 feet 221° from Rice Point Light 8. 46 45.1 92 05.9	40 42	----
1356	RICE POINT RANGE REAR. F. R. U.	1,600 feet 315° from front light.	70	----
<b>ST. LOUIS BAY</b>				
1357	North Channel Lighted Buoy 4. Fl. R., 4 sec.	In 25 feet, on north side of channel at turn, east end of bay.	10	----
1358	North Channel Lighted Buoy 6. Qk. Fl. W.	In 25 feet, on south side of channel, abreast preceding.	10	----
1359	North Channel Lighted Buoy 11. Qk. Fl. W.	In 25 feet at easterly intersection of north and cross channels.	10	----
1360	North Channel Lighted Buoy 13. Qk. Fl. G.	In 25 feet, west of intersection of north and cross channels.	10	----
1361	North Channel Lighted Buoy 12. Fl. R., 4 sec.	In 25 feet, on north bank.	10	----
1362	North and South Channels Junction Lighted Buoy. I. Qk. Fl. W.	In 25 feet at west intersection of north and south channels.	10	----
1363	NORTH CHANNEL RANGE FRONT. Fl. R., 1 sec. U.	In 7 feet, at west end of channel. 46 44.1 92 08.7	41	----
1364	NORTH AND SOUTH CHANNELS RANGE REAR. F. R. U.	In 7 feet, 800 feet 227° from North Front Light and 247½° from South Front Light.	57	----
1365	SOUTH CHANNEL RANGE FRONT. Fl. R., 1 sec. U. Fl. R., 1 sec.	In 7 feet, at west end of south channel. 46 44.1 92 08.7	41	----
1366	Cross Channel Lighted Buoy 8. Qk. Fl. R.	In 25 feet, at easterly intersection of south and cross channels.	10	----
1367	Cross Channel Lighted Buoy 6. Fl. R., 4 sec.	In 25 feet, on east side of dredged channel.	10	----
1368	Cross Channel Lighted Buoy 1. Fl. W., 4 sec.	In 25 feet, at angle on west side of dredged channel.	10	----
1369	South Channel Lighted Buoy 5. Fl. W., 4 sec.	In 25 feet, on south side of channel.	10	----
1370	South Channel Lighted Buoy 9. Qk. Fl. G.	In 25 feet, on southeast side of channel at turn.	10	----

## MINNESOTA

No.	Candlepower Apparatus Illuminator	Light characteristic Fog signal	Structure, vessel or buoy Top of lantern above ground	Established Rebuilt
1353	20 200 mm a	75 flashes per minute.	Feet Black. Spar station buoy.	Year 1812
1354	45 300 mm a	75 flashes per minute.	Red skeleton tower on pier.	1834
1355	19,000 Rf e	Visible on range line only.	Red and white striped daymark on red skeleton tower.	1835
1356	200 300 mm e 19,000 Rf e	Visible from 180° to 60°.	Red and white striped daymark on red skeleton tower.	1835
1357	40 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1358	110 200 mm a	75 flashes per minute.	Black. Spar station buoy.	
1359	110 200 mm a	75 flashes per minute.	Black. Spar station buoy.	
1360	20 200 mm a	75 flashes per minute.	Black. Spar station buoy.	
1361	30 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1362	110 200 mm a	Flashes interrupted by eclipse.	Red and black horizontal bands. Spar station buoy.	
1363	1,100 Rf e	Flash 0.3 sec.	White daymark on red skeleton tower.	1893
1364	500 Rf e		White daymark on red skeleton tower.	1893 1934
1365	1,100 Rf e 45 150 mm e	Flash 0.3 sec., visible on range line only. Visible around horizon.	White daymark on red skeleton tower.	1893 1934
1366	80 200 mm a	75 flashes per minute.	Red. Spar station buoy.	
1367	80 200 mm a	Flash 0.4 sec.	Red. Spar station buoy.	
1368	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1369	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1370	20 200 mm a	75 flashes per minute.	Black. Spar station buoy.	

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>ST. LOUIS RIVER</b>					
1371	Grossy Point Lighted Buoy 4. Qk. Fl. R.	In 21 feet, off point, on north- west side of channel at turn.		10	-----
1372	St. Louis River Range FRONT. F. G. F. G. F. R.	On east edge of channel at Grassy Point turn.	46 43.2      92 08.7	23	-----
				25	-----
1373	St. Louis River Range REAR. F. R. F. R.	On bank, 1,020 feet 34½° from front light.		51	-----
				30	-----
1374	St. Louis River Lighted Buoy 9. Fl. W., 4 sec.	In 21 feet, on south side of channel.		10	-----
1375	St. Louis River Lighted Buoy 8. Fl. R., 4 sec.	In 21 feet, on north side of channel, west of Grassy Point.		10	-----
1376	St. Louis River Lighted Buoy 12. Fl. R., 4 sec.	In 21 feet, on north side of channel.		10	-----
1377	St. Louis River Lighted Buoy 13. Fl. W., 4 sec.	In 21 feet, on south side of channel.		10	-----
<b>NORTHWEST SIDE</b>					
1378	Two Harbors----- Gp. Fl. W., 20 sec. 2 flashes. Radiobeacon. Distance-Finding Station.	On point, between Agate and Burlington Bays. 47 00.8      91 39.7		78	17
1379	Two Harbors West Break- water. Fl. W., 4 sec.	On breakwater-----		20	7
1380	Two Harbors Construction Lighted Buoy 4. Qk. Fl. R.	In 60 feet, marks outer end of old breakwater.		13	-----
1380.5	Two Harbors Construction Lighted Bell Buoy 2. Fl. R., 4 sec.	In 75 feet, marks southwest limit of restricted area.		10	-----
1381	Split Rock----- Fl. W., 10 sec.	On promontory, 1¼ miles northeast from Split Rock Point. 47 12.0      91 22.0		178	22
1382	Grand Marais----- Fl. W., 3 sec.	On outer end of east break- water. 47 44.7      90 20.3		38	13

## MINNESOTA AND MICHIGAN

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1371	30	75 flashes per minute-----	Feet	Year
1372	200 mm a	Visible on range line only---	Red.	Spar station buoy.
	19,000		White daymark on black skeleton tower.	1903 1934
1373	Rf e	Visible from 30° to 270°---	White daymark on black skeleton tower.	1903 1934
	210			
1374	800 mm e	Two lights insure visibility past Arrowhead bridge.	White daymark on black skeleton tower.	1903 1934
	19,000			
1375	Rf e	Flash 0.4 sec-----	Black.	Spar station buoy.
1376	200 mm a	Flash 0.4 sec-----	Red.	Spar station buoy.
1377	200 mm a	Flash 0.4 sec-----	Red.	Spar station buoy.
1378	200,000 4 e	Flash 0.4 sec., eclipse 4.6 sec., flash 0.4 sec., eclipse 14.6 sec.  DIAPHONE, air; Group of 2 blasts every 30 sec., blast 1 sec., silent 1 sec., blast 1 sec., silent 27 sec. RADIOBEACON; Transmits on 308 kc, groups of dot, dash, dash, dot (•—•—•). Antenna lead-in 95 feet 225° from light tower.	Red square brick tower on dwelling. 50 Telephone at this station. DISTANCE-FINDING STA- TION. For method of operation, see p. 11.	1892 1922
1379	50 200 mm e	Flash 0.4 sec-----	Storm warning signals shown on outer end of D. and I. R. R. R. dock No. 6.	1916
1380	30 200 mm a	75 flashes per minute-----	Black mast on tank house.	1916
1380.5	150 200 mm e	Flash 0.4 sec-----	Red.	
1381	450,000 3 e	Flash 0.5 sec., eclipse 9.5 sec. DIAPHONE, air; blast 2 sec., silent 18 sec.	Red.	
1382	2,500 5 e	Flash 1 sec-----	Buff octagonal brick tower, fog-signal house adjacent. 35 Telephone at this station.	1910 1922
		HOBN, diaphragm, air; group of 2 blasts every 30 sec., blast 1 sec., silent 1 sec., blast 1 sec., silent 27 sec.	White square pyramidal skel- eton tower, upper part in- closed.	1885 1922



## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTHWEST SIDE</b>					
1333	GRAND MARAIS WEST BREAKWATER. Fl. G., 4 sec.	On breakwater 47 44.6	90 20.4	Feet 36	
1334	Rock of Ages..... Gp. Fl. W., 10 sec. 2 flashes. Radio beacon. Distance-Finding Station.	Off west end of Isle Royale... 47 52.0	89 18.8	117	19
1335	Isle Royale..... Fl. W., 4 sec.	On Menagerie Island..... 47 56.9	88 45.7	72	15
1336	ROCK HARBOR WEST EN- TRANCE. Gp. Fl. W., 6 sec. 2 flashes.	Northwesterly end of Caribou Island. 48 05.7	88 34.4	22	11
1337	BLAKE POINT..... Fl. W., 4 sec.	At Blake Point, northeast end of Isle Royale.		40	10
1338	Passage Island..... Fl. W., 7.5 sec. Radio beacon. Distance-Finding Station.	On southwest point of Island... 48 13.4	83 21.9	78	17
<b>NORTHEAST SIDE</b>					
1339	Île Parisienne..... Occ. W., 8 sec.	On southwest end of Island... 46 38.9	84 42.8	54	14
1300	Pancake Shoal Lighted Bell Buoy. Fl. W.	In 42 feet, off northerly point of shoal.			

## MICHIGAN AND CANADA

No.	Candlepower Apparatus Luminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1333	10 200 mm a	Flash 0.4 sec..... Signal station 0.4 mile north of light tower.	Feet Black skeleton steel tower. 1902 1804	Year 1902 1804
1334	400,000 2 e 110 200 mm a	Flash 0.5 sec., eclipse 2 sec., flash 0.5 sec., eclipse 7 sec. Winter light, shows station characteristic. HORN, diaphragm, air; blast 2 sec., silent 28 sec. RADIOBEACON: Transmits on 286 kc, groups of 2 dashes, 2 dots (--- ● ● ●). Antenna lead-in at light tower.	Storm warning signals shown on village ground north of harbor. Buff conical brick tower on cylindrical base. 1908 130 Radiotelephone at this sta- tion.	1908
1335	800 4 a	Flash 0.4 sec.....	White octagonal stone tower, dwelling attached. 61	1876 1941
1336	400 200 mm e	Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 4 sec. DIAPHONE, air. Sounds only when vessels are known to be entering or leaving harbor; blast 2 sec., silent 18 sec. Vessels should advise Na- tional Park Service, Hough- ton, Mich., of date and hour Fog Signal will be required. Maintained May 1 to Nov. 15 by National Park Serv- ice.		
1337	110 200 mm a	Flash 0.4 sec.....	White skeleton tower, white lamp house adjacent. 20	1917
1338	50,000 4 e	Flash 1.0 sec., eclipse 6.5 sec. DIAPHONE, air; blast 4 sec., silent 28 sec. RADIOBEACON: Transmits on 302 kc, groups of dash 2 dots, dash (--- ● ● ●). Antenna lead-in at light tower.	Gray octagonal stone tower on dwelling. 44 Radiotelephone at this sta- tion. DISTANCE-FINDING STA- TION. For method of operation, see p. 11.	1882
1339		Light 4 sec., eclipse 2 sec. Winter light, Fl. W. DIAPHONE, air; group of 2 blasts every 60 sec.; blast 4 sec., silent 4 sec., blast 4 sec., silent 48 sec. Horn points 232°.	Gray hexagonal concrete tower; red lantern. White dwelling 120 feet 55" from tower. 58	1912
1300	a	BELL, on buoy.....	Black.	

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTHEAST SIDE</b>					
1305	Corbeil Point Lighted Bell Buoy. Fl. E.	In 42 feet, off south end of shoal.		Fath	
1301	CORBEIL POINT F. W.	On point, north side of entrance to Batchawana Bay. C.		77	16
1392	COPPERMINE POINT Fl. W.	On northwest end of point. C.	46 53.8      84 30.1	61	15
1303	MAMAINSE POINT ENTRANCE F. W.	On westerly point. C.	46 59.1      84 47.1	33	10
1304	MONTREAL RIVER F. W.	On outer end of dock. C.	47 02.3      84 47.0		
1305	Gargantua Gk. Fl. W.	On summit of small island, at entrance to Gargantua Harbor. C.	47 33.5      84 57.8	72	
1306	Michipicoten Harbor Fl. W., 30 sec. Radiobeacon. Distance-Finding Station.	On southeast end of Perk-wakwia Point. C.	47 56.9      84 54.2	70	16
1397	MICHIPICOTEN HARBOR RANGE FRONT. F. E.	200 feet north of the inner end of wharf. C.	47 57.7      84 45.0	52	
1398	MICHIPICOTEN HARBOR RANGE REAR. F. E.	840 feet 350° from front light. C.		96	
1399	Caribou Island Gp. Fl. W., 10 sec. 3 flashes. Radiobeacon. Distance-Finding Station.	On small island southwest of Caribou Island. C.	47 20.4      85 49.5	99	17
1400	Michipicoten Island East End. Gp. Fl. W., 6½ sec. 2 flashes. Radiobeacon.	On northeast end of island. C.	47 45.3      85 35.8	84	17
1401	Davileaux Island Gp. Fl. W., 24 sec. 4 flashes.	On summit of island south of Quebec Harbor, Michipicoten Island. C.	47 41.7      85 48.7	129	20

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic. Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1305		BELL, on buoy. a	Fath Red.	Year
1301		HORN, hand, answers signals.	White square wooden tower; white lantern. 63	1873 1931
1392			White square wooden tower, red lantern. 32	1901 1923
1393		Visible around horizon. HORN, hand, answers signals.	Pole.	1941
1394			Mast.	1946
1395			White daymark on skeleton tower.	1889 1949
1396		DIAPHONE; group 2 blasts every 30 sec.; blast 2 sec., silent 3 sec., blast 2 sec., silent 23 sec. Horn points 210°.	Lantern on white square wooden building, red roof. 31	1902 1930
1397		RADIOBEACON: Transmits on 298 kc, groups of dot, dash, dot (•—•) followed by 1 long dash. Range maintained by Algoma Central Ry. Lights in line lead to commercial pier.		DISTANCE-FINDING STATION. For method of operation, see p. 11. Lantern on pole. 1941
1398				
1399		3 flashes 0.5 sec. each, 2 eclipses 1.2 sec. each, 1 eclipse 6.1 sec. DIAPHONE, air; blast 2 sec., silent 28 sec. Horn points 178°.	Concrete hexagonal pyramidal tower, red cylindrical lantern. 104	1886 1912
1400		RADIOBEACON: Transmits on 292 kc, 3 groups of 1 dot, 1 dash (•—) followed by 2 long dashes. Radar reflectors mounted around top of lighthouse tower. Flash ½ sec., eclipse 1 sec., flash ¼ sec., eclipse 5 sec. HORN, hand, answers signals. RADIOBEACON: Transmits on 292 kc, groups of 2 dashes, 1 dot, 1 dash (—•—•) followed by 3 long dashes.		DISTANCE-FINDING STATION. For method of operation see p. 11. Black.
1401	30,000	Flash, eclipse 3 sec., flash, eclipse 3 sec., flash, eclipse 3 sec., flash, eclipse 15 sec. HORN, hand, answers signals.	Concrete hexagonal pyramidal tower, red lantern. Dwelling 90 feet southwest of tower. S3	1912
1401			White octagonal pyramidal concrete tower, red lantern.	1872 1918

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTHEAST SIDE</b>					
1402	QUEBEC HARBOR RANGE FRONT. F. W.	On north shore of Quebec Harbor. 47 43.1	85 47.0	Feet 23	11
1403	QUEBEC HARBOR RANGE REAR. F. W.	574 feet 0°43' from front light.		67	15
<b>NORTH SIDE</b>					
1404	Otter Island..... Fl. W., 8 sec.	On northwest end of island. 48 06.7	86 04.0	97	12
1405	Superior Shoal Lighted Whistle Buoy. Fl. W.	In 93 feet, southwesterly of shoalest spot.			
1405	HERON BAY RANGE FRONT..... F. G.	On small island..... 48 39.1	86 18.4	35	
1406	HERON BAY RANGE REAR..... F. G.	On hillside, 1,275 feet 58' from front light.		70	
1407	Peninsula Harbor..... Fl. W., 30 sec.	On south end of Hawkins Island. 48 43.2	86 25.9	88	17
1407.5	SKIN ISLAND..... Fl. W.	On southerly end of island. 48 43.7	86 23.6	45	
1408	JACKFISH BAY..... Fl. W.	On southwest end of St. Patrick Island. 48 47.3	86 58.9	39	13
1409	Slate Islands..... Gp. Fl. W., 15 sec. 2 flashes. Radiobeacon.	On summit of hill, on south end of South Slate Island. 48 37.3	86 59.8	224	20
1410	Battle Island..... Gp. Fl. W., 24 sec. 3 flashes.	On southwest point of island east entrance to Nipigon Bay. 48 45.1	87 33.4	118	19
1408.5	ROSSPORT HARBOR EN- TRANCE. Fl. W.	Marks entrance to harbor. 48 49.6	87 31.3		
1411	ROSSPORT..... F. R.	On Government Wharf..... 48 50.0	87 31.2	25	
1412	RED ROCK PAPER MILL RANGE FRONT. F. G.	48 56.8	88 14.3	25	
1413	RED ROCK PAPER MILL RANGE REAR. F. G.	640 feet 271° from front light.		39	

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1402	2,500	Range line leads between Hope and Davileaux Islands and marks axis of dredged channel at entrance to harbor.	Feet White, rectangular, wooden building.	Year 1872 1938
1403	2,500	-----	White, square, pyramidal, wood. 42.	1918
1404	20,000	DIAPHONE, air; group of 2 blasts every 60 sec.; blast 2 sec., silent 3 sec., blast 2 sec., silent 53 sec. Horn points 243°.	White octagonal tower, red lantern. 36	1903 1920
1404.5	-----	WHISTLE, on buoy.....	Red and black horizontal bands.	
1405	e	-----	White daymark.	1939
1406	e	-----	White daymark.	1930
1407	15,000	TRUMPET; blast 1 sec., silent 14 sec. Horn points 210°.	White square tower, on dwelling. 1801 1929	1947
1408	-----	-----	White square skeleton tower. 14	1907
1409	25,000	Flash, eclipse 3½ sec., flash, eclipse 1½ sec. DIAPHONE, air; blast 3.5 sec. silent 56.5 sec. Horn points 170°. RADIOBEACON: Transmits on 292 kc, groups of dash, 3 dots (--- • • •), followed by 1 long dash.	White octagonal tower, red lantern. 36	1903
1410	20,000	Group of 3 flashes, followed by 16 sec. eclipse; 4 sec. between flashes in group. DIAPHONE, air; blast 3.5 sec. silent 26.5 sec. Horn points 180°.	White octagonal concrete tower, red lantern. Dwelling 300 feet northeastward. 43	1877 1914
1408.5	-----	-----	White daymark on pole.	1940
1411	-----	-----	Mast. 20	1940
1412	-----	-----	White triangular daymark, apex upward, on pole.	1945
1413	-----	-----	White triangular daymark apex downward, on pole.	1945

## LAKE SUPERIOR

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH SIDE</b>					
1414	Lamb Island..... Fl. W., 25 sec.	At western entrance to Nipigon Bay. 48 30.2	88 08.7	Feet 90	17
1415	SHAQANASH..... F. W.	On west end of island No. 10. 48 26.2	88 28.8	36	12
1416	Porphyry Point..... Occ. W., 6 sec.	On southwest end of Porphyry Island. 48 20.4	88 38.9	56	15
1417	Trowbridge Island..... Fl. W., 5 sec.	On summit of island, 3.1 miles 102° from Thunder Cape. 48 17.6	88 52.4	114	19
1418	ANGUS ISLAND..... Fl. W., 20 sec. Radiobeacon.	Near north end of island, west side of entrance to Thunder Bay. 48 14.2	89 00.5	70	16
<b>THUNDER BAY</b>					
1419	THUNDER CAPE..... Fl. W.	On west side of cape..... 48 18.2	88 56.8	50	
1420	Hare Island Reef Lighted Bell Buoy. Fl. R.	2 miles 274° from Thunder Cape Light, southeast of 24-foot spot. C.			
1421	Welcome Island..... Fl. W., 10 sec.	On northeast end of the eastern Welcome Island. 48 22.1	89 07.2	112	19
1422	Welcome Shoal Lighted Buoy..... Fl. R.	In 24 feet, on south end of shoal. C.			
1423	MISSION CHANNEL ENTRANCE..... Fl. G., 2 sec.	On outer end of revetment, south side of entrance channel. C.		34	
1424	MISSION CHANNEL RANGE FRONT..... F. R.	On south side of channel, 0.3 mile west of mouth. 48 21.4	89 13.5	25	8
1425	MISSION CHANNEL RANGE REAR..... F. R.	1,500 feet 290° from front light. C.		38	8
1426	Fort William North Lighted Bell Buoy. Fl. R.	At outer end of north side of cut, mouth of Kaminiistikwia River. C.			
1427	Fort William South Lighted Trumpet Buoy. Fl. W.	At outer end of south side of cut, abreast preceding. C.			
1428	FORT WILLIAM RANGE FRONT..... F. R.	On southeast corner of Empire Elevator, at entrance to Kaminiistikwia River. C.		110	18
1429	FORT WILLIAM RANGE REAR..... F. R.	On bracket on side of Empire Elevator, 147 feet 254½° from front light. C.		142	20

## CANADA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1414		DIAPHONE, air; group of 2 blasts every 60 sec.; blast 2.5 sec., silent 3 sec., blast 2.5 sec., silent 52 sec.	Feet White square tower, dwelling attached, red lantern. 46	Year 1877 1930
1415		HORN, hand, answers signals.	White, square, wood; white rectangular wooden dwelling. 34	1910 1923
1416		Light 3 sec., eclipse 3 sec. DIAPHONE, air; blast 2.5 sec., silent 57.5 sec. Horn points southeast.	White, square, wood; red lantern. 42	1878 1944
1417		DIAPHONE, air; group of 2 blasts every 60 sec.; blast 3½ sec., silent 9 sec., blast 3½ sec., silent 44½ sec. Horn points southeast.	White octagonal concrete tower, red lantern. 39	1924
1418		DIAPHONE, air; blast 2.5 sec., silent 27.5 sec. Horn points southeast. RADIOBEACON: Transmits on 298 kc, 3 groups of 2 dots, dash, dot (• • — •) followed by 2 long dashes.	White square wooden dwelling. 1927	1927
1419	e		White mast with small white shed at base. 1874	1944
1420		BELL, on buoy.....	Red.	
1421		DIAPHONE, air; group of 2 blasts every 70 sec.; blast 2.5 sec., silent 5 sec., blast 2.5 sec., silent 60 sec.	White square dwelling, white lantern on red roof 38	1906 1936
1422			Red.	
1423	e	Flash 0.5 sec..... TRUMPET; electric; blast 1 sec., silent 14 sec.	White pole, shed at base. 21	1917 1943
1424	800 e		White triangular daymark, apex up, on mast. 28	1913 1927
1425	800 e		White triangular daymark, apex down, on mast. 35	1913 1927
1426		BELL, on buoy.....	Red.	
1427	50 e	TRUMPET, on buoy; blast 1.5 sec., silent 15 sec.	Black.	
1428	e		Storm signal mast close to Ogilvy's elevator. 1936	1936
1429	e			1936

## LAKE SUPERIOR AND RAINY LAKE

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>THUNDER BAY</b>					
1430	PORT ARTHUR SOUTH EN- TRANCE 1. Fl. R., 4 sec.	U.	On breakwater, on north side of south entrance. C.	Feet 37	13
1431	PORT ARTHUR SOUTH EN- TRANCE 2. Fl. G.	U.	On north end of south break- water. C.	37	13
1432	PORT ARTHUR CENTRAL EN- TRANCE OUTER. Fl. G., 7½ sec.	U.	On breakwater, on north side of channel. C.	48	-----
1433	PORT ARTHUR CENTRAL EN- TRANCE INNER. Fl. R.	U.	On end of breakwater, on north side of channel. C.	48 25.9	89 11.8
1434	PORT ARTHUR NORTH EN- TRANCE SOUTH. Fl. G.	U.	Southwest side of north en- trance to harbor. C.	48 26.1	89 12.3
1435	PORT ARTHUR NORTH EN- TRANCE NORTH. Fl. R.	U.	Near southwest end of north breakwater. C.	48 26.6	89 10.6
1436	PIE ISLAND..... Fl. W.	U.	On point, west end of island. C.	48 14.1	89 10.4
1437	Victoria Island..... F. W.	U.	On end of point, northwest end of island. C.	48 04.9	89 21.7
<b>RAINY LAKE</b>					
1438	ROBERTS ISLAND..... Fl. W., 4 sec.	U.	On submerged rocks off south- erly end of Roberts Island. C.	48 37.2	93 16.0
1439	FRANSEN ISLAND..... Fl. G., 4 sec.	U.	On northwesterly tip of island. C.	48 37.7	93 15.1
1440	Red Sucker Island Lighted Buoy. Fl. W., 4 sec.	U.	In 12 feet, off northwesterly end of island. C.	5	8
1441	BALD ROCK..... Fl. W., 4 sec.	U.	On a large exposed rock, southerly of westerly end of Red Pine Island. C.	48 37.4	93 10.9
1442	RANIER RANGE FRONT..... F. W.	U.	900 feet south from center of railroad bridge. C.	48 36.7	93 21.2
1443	RANIER RANGE REAR..... F. W.	U.	174 feet 95½° from front light. C.	28	12
<b>RAINY RIVER</b>					
1131	BAUDETTE HARBOR EN- TRANCE 2. Fl. R., 6 sec.	U.	On west side of entrance to bay. C.	8	-----
1133	WHEELER POINT..... Occ. R., 8 sec.	U.	48 50.4	94 41.6	40
<b>LAKE OF THE WOODS</b>					
1444	OAK POINT..... Fl. R., 4 sec.	U.	On easterly end of Curry's Island. C.	48 52.2	94 41.2

## CANADA AND MINNESOTA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1430	-----	Flash 0.8 sec.-----	Feet 32	Year 1916
1431	-----	-----	White mast with small houses at base. 1926 1926	
1432	-----	HORN, diaphragm, air; blast 2½ sec., silent 17½ sec.	White square structure, red lantern. 1940 1944	
1433	-----	BELL, electric; 1 stroke, si- lent 1 sec., 1 stroke, silent 6 sec.	Red structure. 1937	
1434	-----	-----	Storm warning signals shown on roof of Custom House. 1942	
1435	e	-----	Mast, white shed at base. 1923 1944	
1436	-----	Visible from all points of ap- proach except where hidden by high land of Pie Island, east of it.	White, square, wood; red lantern; dwelling northeast. 1895 1921	
1437	-----	Visible from all points of ap- proach on the inside chan- nel and from the westward. HORN, hand, answers signals.	White, square, wood; red lantern; dwelling southeast. 1881 1904	
1438	180 200 mm e	Flash 0.4 sec.-----	White skeleton tower on a white tank house. 1941	
1439	30 200 mm e	Flash 0.4 sec.-----	White skeleton tower on a white tank house. 1941	
1440	40 150 mm e	Flash 0.4 sec.-----	Black.	
1441	180 200 mm e	Flash 0.4 sec.-----	White skeleton tower on a white tank house. 1941	
1442	600 300 mm e	-----	White diamond daymark on steel mast. 1910	
1443	600 300 mm e	-----	White diamond daymark on steel mast. 1910	
1131	----- c	Flash 2 sec. Maintained by Baudette Civic and Com- merce Assn., Baudette, Minn.	Red pole. 1949	
1133	----- e	Light 4 sec., ellipse 4 sec. Maintained by Baudette Civic and Commerce Assn., Baudette, Minn.	White and orange pole. 1949	
1444	45 200 mm e	Flash 0.4 sec.-----	White skeleton tower on a white tank house. 1941	

## LAKE OF THE WOODS

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE OF THE WOODS</b>					
1445	RAINY RIVER Fl. W. U.	On southwest end of Sable Island.		Feet 37	8
1446	QUICKS ISLAND Fl. W. U.	48 52.8 94 40.7 East side of entrance to Sable Island channel.			
1447	TOMAHAWK ISLAND Fl. W. U.	48 57.0 94 38.4 On island, McCauley Bay.		85	13
1448	BRULE POINT Fl. W. U.	49 01.6 94 30.6 On west end of point.			
1449	FERRIS ISLAND Fl. W. U.	49 07.4 94 20.1 Off Hooper Point, west end of Bigsby Island.		36	13
1450	DRIFTWOOD POINT Fl. W., 4 sec. U.	49 03.1 94 38.9 Southerly of Driftwood Point.		46	11
1451	SQUAW ISLAND Fl. W. U.	49 12.4 94 58.8 On island, west of south point of Island 37 B.		33	13
1452	OAK ISLAND Fl. G., 4 sec. U.	49 17.7 94 49.3 Southwesterly tip of island.		39	7
1453	BISHOPS BAY RANGE FRONT Fl. W. U.	49 19.1 94 53.1 On small island, north of Royal Island.		17	2
1454	BISHOPS BAY RANGE REAR Fl. R. U.	49 28.3 94 45.7 On north shore of Royal Island, 160½° from front light.		28	2
1456	DAVIES REEF Fl. W. U.	49 31.8 94 42.3 C.		18	5
1457	ANDREW BAY Fl. W. U.	49 38.7 94 27.3 C.		18	5
1458	WEST OF YELLOW GIRL Fl. W. U.	49 32.1 94 21.8 C.		18	3
1459	CROW ROCK NARROWS Fl. W. U.	On west side of narrows.		18	5
1460	PTARMIGAN BAY Fl. W. U.	49 36.0 94 36.8 On small island south of Corkscrew Island.		18	5
1461	WYLLIES REEF Fl. W. U.	South of Wolf Island.		18	5
1462	ROCKY NARROWS Fl. W. U.	49 39.5 94 32.0 On east side of channel.		18	5
14625	KEEWATIN EAST CHANNEL ENTRANCE Fl. W. U.	49 41.4 94 28.7 On reef ¼ mile east by north of entrance to channel.		16	
1463	ISLAND D-92 Fl. W. U.	On southeast point of island, 4 miles below Kenora.		50	
1464	DEVIL GAP HEAD Fl. W. U.	49 43.9 94 23.5 On east side of south end of gap.			
1465	DEVIL GAP FOOT Fl. W. U.	49 44.7 94 29.1 At north end of gap.			
1466	WARROAD HARBOR ENTRANCE Gp. Fl. W., 10 sec. 4 flashes. U.	In 12 feet, on west side of channel.		12	

## CANADA AND MINNESOTA

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1445			Feet 38	Year 1895 1943
1446				1929
1447			33	1901
1448				1901
1449			28	1897
1450	180 200 mm e	Flash 0.4 sec.		1941 1945
1451			33	1900 1930
1452	30 200 mm e	Flash 0.4 sec.		1941
1453			20	1897
1454			28	1897
1456				1937
1457				1931
1458				1931
1459	a			1939
1460	a			1939
1461	a			1939
1462	a			1939
14625				
1463	e			1944
1464	e			1914
1465	e			1914
1466	180 200 mm e	Flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 1 sec., flash 0.5 sec., eclipse 5 sec.		1930 1946

## LAKE OF THE WOODS AND LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE OF THE WOODS</b>					
1467	WARROAD HARBOR EN- TRANCE RANGE FRONT. U. F. W.	In 5 feet, on south side of channel, at turn.		Feet 35	18
1468	WARROAD HARBOR EN- TRANCE RANGE REAR. U. F. W.	1,050 feet 223° from front light.		60	15
1685	GULL ROCK..... Fl. W., 4 sec. U.	At entrance to Muskeg Bay.. 45 59.0                      95 03.6		17	5
<b>LAKE MICHIGAN</b>					
<b>STRAITS OF MACKINAC</b>					
1469	St. Helens..... Fl. R., 4 sec. U.	On southeast point of St. Helena Island. 45 51.3                      84 51.8		71	13
1470	New Shoal Lighted Buoy 1... Fl. W., 4 sec.	In 57 feet 3¼ miles 47° from Waugoshance unused light- house.		11	9
1471	New Shoal Lighted Bell Buoy 6. Fl. W., 4 sec.	In 57 feet, 1½ miles 174½° from White Shoal Light- house.		11	9
1472	White Shoal..... Fl. W., 15 sec.	In 20 feet, on east end of shoal. 45 50.5                      85 08.1		125	20
1473	Simmons Reef Lighted Bell Buoy 2. Fl. W., 4 sec.	In 26 feet, on south end of reef.		11	9
1474	Grays Reef East Channel Lighted Bell Buoy 2. Fl. R., 4 sec.	In 32 feet, 6,000 feet 6° from Grays Reef Light.		11	7
1475	Grays Reef East Channel Lighted Bell Buoy 7. Fl. W., 4 sec.	In 28 feet, at elbow in channel opposite Grays Reef Light.		11	9
1476	Grays Reef..... Occ. R., 6 sec. Radiobeacon. Distance-Finding Station.	In 26 feet, at elbow in Grays Reef East Channel. 45 48.0                      85 09.2		82	17
<b>EAST SIDE</b>					
1477	De Aux Galats..... F. W.	On De Aux Galats Rock..... 45 40.6                      85 10.3		58	15

## MINNESOTA AND MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristics Peg signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1467	2,000 300 mm e	.....	Feet White diamond daymark, black center, on concrete block.	Year 1907 1927
1468	2,000 300 mm e	.....	White diamond daymark, black center, on concrete block.	1907 1927
1685	90 200 mm e	Flash 0.4 sec.....	Pipe with box on concrete base.	1949
1469	350 3¼ a	Flash 0.4 sec., eclipse 3.8 sec.	White conical tower con- nected to dwelling.	1873 71
1470	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1471	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Black. Spar station buoy. Iron buoy in winter.	
1472	3,000,000 2 e 200 300 mm a	Flash 0.4 sec., eclipse 14.6 sec. Winter light, Fl. W., flash 0.3 sec., eclipse 2.7 sec. HORN, diaphragm, chime, air; group of 2 blasts every 45 sec.; blast 3 sec., silent 3 sec., blast 1.5 sec., silent 37.5 sec.	Gray conical tower on square concrete pier, silver-gray lantern.	1910 124
1473	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1474	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1475	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Black. Spar station buoy.	
1476	13,000 3¼ e 130 3¼ a	Light 4 sec., eclipse 2 sec. Light displayed during day- light hours when sound signal is in operation. Winter light, Fl. R., flash 0.5 sec. eclipse 4.5 sec. HORN, diaphragm, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 296 kc. groups of dash, 2 dots, dash (— • • —). Antenna lead-in at light tower.	Cream colored square tower on concrete crib, black lantern.	1936
1477	3,000 4 lov 110 200 mm a	DIAPHONE, air; blast 3 sec., silent 27 sec. Winter light Fl. W., flash 0.3 sec., eclipse 2.7 sec.	White octagonal tower con- nected to dwelling.	1850 1886
			Telephone via Beaver Island Coast Guard Station.	

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
1478	Beaver Island Shoal Northeast End Lighted Bell Buoy 1. Fl. W., 4 sec.	In 20 feet, south side of pas- sage between Beaver and Garden Islands.		Feet 11	9
1479	St. JAMES..... Occ. R., 6 sec.	On northeast end of Beaver Island. 45 44.5	85 30.5	38	13
1480	Stony Point Shoal Lighted Bell Buoy 1. Fl. W., 10 sec.	In 23 feet, on east end of shoal, south side of entrance to Beaver Harbor.		11	6
1481	Beaver Island..... F. Fl. W., 20 sec.	On bluff, south end of island. 45 34.5	85 34.4	103	18
1482	LITTLE TRAVERSE..... F. G.	On Harbor Point, north side Little Traverse Bay. 45 25.1	84 58.7	41	14
1483	PETOSKEY..... Fl. R., 5 sec.	Near end of breakwater, south side of Little Traverse Bay.		44	7
1484	CHARLEVOIX NORTH PIER- HEAD. Fl. W., 4 sec.	Near outer end of pier..... 45 19.3	85 15.9	61	15
1485	CHARLEVOIX SOUTH PIER- HEAD. F. R.	On outer end of pier.....		41	13
1486	Charlevoix Lighted Bell Buoy 1A. Fl. W., 4 sec.	In 24 feet, off South Point, on north end of shoal.		11	9
1487	Grand Traverse..... F. W.	On Lighthouse Point, west side of entrance to Grand Traverse Bay. 45 12.6	85 33.0	47	14
1488	Grand Traverse Bay Shoal Lighted Bell Buoy 3. Fl. G., 4 sec.	In 30 feet off northwesterly end of shoal.		11	6
1489	Northport Point Lighted Bell Buoy 2. Fl. R., 4 sec.	In 30 feet, on south end of shoal, Grand Traverse Bay.		11	7
1490	MISSION POINT..... Fl. W., 10 sec.	Northwest of Old Mission Point. 45 01.3	85 30.4	52	12
1491	Lee Point Lighted Bell Buoy 4. Fl. R., 4 sec.	In 20 feet, on end of shoal Grand Traverse Bay.		11	7

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1478	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Feet Black.	Year Spar station buoy.
1479	900 4 e	Light 4 sec., eclipse 2 sec. Obscured from 127½° to 199½°.	White cylindrical tower	Storm warning signal. shown daytime only at Coast Guard Station. 41 1856 1870
1480	20 200 mm a	Flash 1 sec..... BELL, on buoy.	Black.	Spar station buoy.
1481	F. 1,700 Fl. 14,000 4 lov	Fixed light with 1.3 sec., flash every 20 sec. HORN, diaphragm, air; group of 2 blasts every 30 sec., blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec.	Yellow cylindrical tower con- nected to dwelling. 46	1851 Telephone at this station.
1482	4,000 4 e	BELL; 1 stroke every 15 sec..	Red square tower attached to dwelling. 41	1884 Telephone at this station.
1483	45 300 mm a	Flash 1 sec.....	Red skeleton tower on con- crete base.	1899 1930
1484	900 Li e	Flash 0.4 sec.....	White pyramidal skeleton tower.	1914
1485	1,600 5 e	DIAPHONE, air; blast 2 sec., silent 18 sec.	Red square steel tower, upper part inclosed. 36	1885 1948 Storm warning signals shown east of Coast Guard Station.
1486	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Black.	Spar station buoy.
1487	15,000 4 e	DIAPHONE, air, group of 2 unequal blasts every 60 sec.; blast 2 sec., silent 8 sec., blast 4 sec., silent 46 sec.	Yellow square tower on dwelling. 41	1852 Telephone at this station.
1488	110 200 mm a 20 200 mm a	Winter light, Fl. W., 4 sec., flash 0.4 sec. Flash 0.4 sec..... BELL, on buoy.	Black.	Spar station buoy.
1489	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red.	Spar station buoy.
1490	300 200 mm e	Flash 1 sec.....	White, skeleton tower. 36	1938 Storm warning signals shown at end of main dock, North- port.
1491	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red.	Spar station buoy.



## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
1402	<i>Traverse Beach Lighted Buoy 6.</i> Fl. R., 4 sec.	In 48 feet, 4,500 feet 56° from northeast end of Sears Coal Dock.		Feet 8	7
1403	RENNIE OIL COMPANY..... F. G. U.	On end of pier.....		20	11
1494	BOARDMAN RIVER WEST PIERHEAD LIGHT. U.	On pier, at mouth of river.... 44 45.0	85 30.7	30	10
1495	South Fox Island..... Fl. W., 30 sec.	On south end of island..... 45 22.7	85 50.2	129	20
1406	<i>South Fox Island Shoals Lighted Buoy 8.</i> Fl. W., 4 sec.	In 34 feet, marks south limit of South Fox Island Shoals.		11	9
1497	LELAND NORTH BREAKWATER F. G. U.	On end of north breakwater, at entrance to Leclanau Lake.		25	11
1498	North Manitou Shoal..... Fl. R., 15 sec. Radiobeacon. Distance-Finding Station.	In 21 feet, on south end of shoals. 45 01.2	85 57.4	79	17
1499	South Manitou..... F. W.	On southeast point of South Manitou Island. 45 00.5	86 05.8	104	19
1500	<i>Sleeping Bear Lighted Bell Buoy 7.</i> Fl. W., 4 sec.	In 34 feet, 1 1/4 miles off Sleeping Bear Point.		11	9
1501	Point Betula..... Fl. W., 10 sec. Radiobeacon. Distance-Finding Station.	On point..... 44 41.5	86 15.3	52	15
1502	Frankfort North Breakwater.. F. W. Radiobeacon.	On outer end of north breakwater. 44 37.8	86 15.0	72	16

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristics Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1402	30 200 mm a	Flash 0.4 sec.....	Red.	Spar station buoy. Year
1403	200 300 mm e	Maintained by Rennie Oil Co.	Post.	1918
1494	180 e	Maintained by the city of Traverse City, Mich.	Post with cross arm.	1914
1495	180,000 4 e 40 150 mm e	Flash 1.2 sec., eclipse 28.8 sec. Winter light Fl. W., 3 sec., flash 0.3 sec. HORN, diaphragm, air; blast 3 sec., silent 17 sec.	White square skeleton tower. 106	1887 1934
1496	110 200 mm a	Flash 0.4 sec.....	Red.	Spar station buoy. Radiotelephone at this station.
1497	200 300 mm e	-----	White cylindrical tower.	1940
1498	250,000 4 e 40 200 mm a	Flash 0.5 sec., eclipse 14.5 sec. Winter light Fl. R., flash 0.5 sec., eclipse 4.5 sec. HORN, diaphragm, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 305 kc, single dots. Antenna lead-in at light tower.	Square, cream color, on concrete base.	1935
1499	11,000 3 e	DIAPHONE, air; blast 6 sec., silent 54 sec.	White conical tower connected to yellow dwelling.	1839 1872
1500	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy. Iron buoy in winter.	1872
1501	70,000 4 e	Flash 1.3 sec., eclipse 8.7 sec. DIAPHONE, two-tone, air; group of 2 blasts every 30 sec.; blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec. RADIOBEACON: Transmits on 290 kc., groups of dot, 2 dashes, dot (• — — — •). Antenna lead-in 190 feet, 35° from lighthouse.	White, red roofs, cylindrical tower, connected to dwelling.	1858 87
1502	17,000 4 e	DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 290 kc., groups of dot, dash, dot (• — •). Antenna lead-in 1,785 feet 93° from lighthouse.	White square pyramidal tower.	1873 1932
			Telephone and radiotelephone via Coast Guard Station.	

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water Feet	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
1503	FRANKFORT NORTH PIER- HEAD. F. G.	1,335 feet	104½° from pre- ceding.	37	13
1504	FRANKFORT SOUTH BREAK- WATER. U. Fl. R., 4 sec.	Near outer end of south break- water.		70	7
1505	FRANKFORT SOUTH PIER- HEAD. U. F. R.	1,600 feet, 96½° from preced- ing.		30	12
1506	PORTAGE LAKE PIERHEAD. U. Fl. W., 4 sec.	On north pier		44	10
1507	Manistee North Pierhead. Op. Occ. W., 30 sec. 3 eclipses.	On outer end of north pier		55	15
1508	MANISTEE SOUTH BREAK- WATER. U. Fl. R., 4 sec.	On outer end of south break- water.		45	7
1508	MANISTEE SOUTH PIERHEAD. U. Occ. R., 2 sec.	On outer end of pier		24	9
1509	Manistee Lake Lighted Buoy 1. U. Fl. W., 4 sec.	In 25 feet, on easterly side of channel.		5	7
1510	Big Sable. U. F. W.	On Big Sable Point		108	19
1511	Ludington North Breakwater Range Front. U. Occ. W., 6 sec. Radiobeacon. Distance-Finding Station.	On breakwater, near outer end.		65	15
1512	LUDINGTON NORTH PIERHEAD RANGE REAR. U. F. W.	On pier, 30 feet from outer end; 1,840 feet 98° from front light.		65	16
1513	LUDINGTON SOUTH BREAK- WATER. U. Occ. R., 2 sec.	On northwest end of break- water.		48	7
1514	LUDINGTON SOUTH PIERHEAD. U. Fl. R., 4 sec.	On pier, 1,800 feet 90½° from preceding.		40	7
1515	PERE MARQUETTE LAKE. U. F. R.	On bend of south pier		20	

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1503	1,400 L i e	BELL, electric; 1 stroke every 15 sec.	Feet White pyramidal skeleton tower.	Year 1886 1932
1504	45 300 mm a	Flash 0.4 sec	Storm warning signals shown at Coast Guard Station. Red tubular mast on pyrami- dal skeleton tower.	1930
1505	1,400 300 mm e		Red skeleton tower.	1928 1934
1506	170 300 mm a	Flash 0.4 sec	White skeleton tower, on con- crete base.	1891 1930
1507	5,000 5 e	3 eclipses 2 sec. each, 2 light periods 2 sec. each, 1 light period 20 sec.	White cylindrical tower.	1875 1927
1508	40 200 mm e	DIAPHONE, air; group of 3 blasts every 30 sec.; 3 blasts 1 sec. each, 2 silences 2 sec. each, 1 silence 23 sec.	Storm warning signals shown at Coast Guard Station.	
1508	40 200 mm e	Flash 0.4 sec	Red skeleton tower.	1915
1508	80 200 mm e	Light 1 sec., eclipse 1 sec.	Red skeleton tower on con- crete base.	1949
1509	40 150 mm e	Flash 0.4 sec	Black. Spar station buoy.	
1510	20,000 3 e	Obscured from 238° to 346°. DIAPHONE, two tone, air; group of 2 blasts every 60 sec.; blast 3 sec., silent 12 sec., blast 3 sec., silent 42 sec.	Conical tower, middle third and top black, remainder white, connected to white dwalling.	1867 107
1511	17,000 4 e	Light 4 sec., eclipse 2 sec. DIAPHONE, air; blast 2 sec., silent 18 sec.	Telephone at this station. White square pyramidal tower.	1870 1924
1512	2,500 L i e	RADIOBEACON: Transmits on 302 kc, groups of 4 dashes (— — — —). Antenna lead in 2,520 feet 94½° from lighthouse. SIREN, electric, group of 2 blasts every 15 sec., blast 2 sec., silent 3 sec., blast 2 sec., silent 8 sec.	Telephone and radiotele- phone via Coast Guard Station. DISTANCE-FINDING STA- TION. For method of operation see p. 11. Storm warning signals shown at Coast Guard Station.	1924
1513	30 200 mm a	Light 1 sec., eclipse 1 sec.	White skeleton tower.	1909 1939
1514	30 200 mm a	Flash 0.4 sec	Red skeleton tower.	1870 1925
1515	20 200 mm e		Red cylindrical post.	1920 1947

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
1516	PENTWATER SOUTH PIERHEAD Fl. R., 4 sec. U.	On south pier, 28 feet from outer end.		Feet 48	7
1517	Little Sable..... F. Fl. W., 30 sec.	On Little Sable Point..... 43 39.2                      86 32.4		108	19
1518	WHITE RIVER PIERHEAD..... Fl. R., 4 sec. U.	On outer end of south pier at entrance to White Lake.		43	8
1519	White River..... Occ. W., 20 sec. U.	On south bank at entrance to White Lake and River. 43 22.5                      86 25.5		57	15
1520	WHITE RIVER PIERHEAD IN- NER. U. F. W.	525 feet 83° from White River Light.		30	8
1521	Indian Point Shoal Lighted Buoy 1. Fl. W., 4 sec.	In 21 feet, on southwest point of shoal, White Lake.		5	7
1522	Long Point Shoal Lighted Buoy 8. Fl. W., 4 sec.	In 18 feet, on south side of shoals.		5	7
1523	MUSKEGON NORTH BREAK- WATER. U. Fl. W., 4 sec.	On end of north breakwater..		53	10
1524	MUSKEGON Breakwater Range Front. F. R.	On lakeward end of south breakwater.		70	16
1525	MUSKEGON PIERHEAD RANGE REAR. Occ. R., 6 sec. Radiobeacon. Distance-Finding Station.	1,815 feet 60° from front light. 43 13.7                      86 20.5		50	14
1526	MUSKEGON LAKE..... F. R. U.	On south pier..... 43 14.0                      86 19.7		24	12
1527	GRAND TRUNK CAR FERRY SLIP RANGE FRONT. U. F. R.	8,200 feet 113° from Muske- gon Lake Light.		30	12
1528	GRAND TRUNK CAR FERRY SLIP RANGE REAR. U. F. R.	435 feet 179° from front light.		85	14
1529	BANK POINT..... Fl. G., 4 sec. U.	In 9 feet, on south point of shoal.		24	6
1530	MUSKEGON HARTSHORN..... Fl. R., 4 sec. U.	In 6 feet, on northerly end of shoal.		23	7

## MICHIGAN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1516	30 300 mm a	Flash 0.4 sec.....	Feet 34	Year 1873 1937
1517	F. 3,500 Fl. 25,000 3 lov	Fixed light with 5 sec. flash every 30 sec.		White conical tower con- nected to red dwelling 107 1874 Telephone at this station.
1518	60 200 mm a	Flash 0.4 sec.....		Red skeleton tower, on con- crete base. 1872 81 1930
1519	10,000 4 e	Light 10 sec., eclipse 10 sec.		Yellow octagonal tower at- tached to dwelling. 1875 38
1520	450 Ll e	.....		Red skeleton tower. 1938
1521	40 150 mm e	Flash 0.4 sec.....		Black. Spar station buoy.
1522	40 150 mm e	Flash 0.4 sec.....		Black. Spar station buoy.
1523	110 200 mm a	Flash 0.4 sec.....		White skeleton tower on con- crete base. 1931
1524	4,000 375 mm e	DIAPHONE, alb; blast 2 sec., silent 18 sec.		Red pyramidal tower. 1928 53 1929
1525	5,000 4 e	Light 4 sec., eclipse 2 sec.--- SIREN, electric, blast 2 sec., silent 18 sec.		Red conical tower. 1852 48 1903 Telephone and radiotele- phone via Coast Guard Station.
1526	2,500 200 mm e	RADIOBEACON: Transmits on 302 kc, groups of dash, dot, dash, dot (--- • --- e). Antenna lead-in is on south pier, 1,815 feet 60° from south breakwater. SIREN, electric, group of 2 blasts every 15 sec., blast 2 sec., silent 3 sec., blast 2 sec., silent 8 sec.		DISTANCE-FINDING STA- TION. For method of oper- ation see p. 11. Storm warning signals shown at Coast Guard Station. Red pyramidal skeleton tower on concrete base. 1805 1925
1527	700 200 mm e	SIREN, electric; blast 3 sec., silent 10 sec.		On post. 1934
1528	600 160 mm e	Range maintained by Grand Trunk Western Railroad Company.		On skeleton tower. 1934
1529	20 200 mm a	Flash 0.4 sec.....		Black skeleton tower, tank house at base, on concrete pier. 1901 15 1915
1530	45 200 mm a	Flash 0.4 sec.....		Red skeleton structure, lower part inclosed, cylindrical concrete base. 1923

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>EAST SIDE</b>					
1330.3	CONSUMERS POWER COMPANY 1. Occ. G., 2 sec. U.	On coal dock piling, at eastern end of Lake Muskegon.		Feet 4	
1330.7	CONSUMERS POWER COMPANY 2. Occ. R., 2 sec. U.	43 15.1	86 15.1	4	
1531	MUSKEGON COUNTY AIRPORT. Fl. W., 10 sec. U.	7 miles 120° from Muskegon Breakwater Light Station.		114	19
1532	GRAND HAVEN NORTH PIERHEAD. Fl. W., 4 sec. U.	On outer end of pier		36	11
1533	GRAND HAVEN PIERHEAD RANGE FRONT. F. R. Radiobeacon.	43 03.5	86 15.4	42	14
1534	Grand Haven Pierhead Range Rear. F. Fl. R., 30 sec.	600 feet 80°08' from front light.		52	15
1334.1	Spring Lake Lighted Buoy 2. Fl. R., 4 sec.	In 31 feet		5	
1334.3	Spring Lake Lighted Buoy 3. Fl. W., 4 sec.	In 32 feet		5	
1334.5	Spring Lake Lighted Buoy 4. Fl. R., 4 sec.	In 23 feet, off Prospect Point.		5	
1334.7	Spring Lake Lighted Buoy 5. Fl. W., 4 sec.	In 23 feet, off Cornelius Bayou.		5	
1334.9	Spring Lake Lighted Buoy 7. Fl. W., 4 sec.	In 21 feet		5	
1535	HOLLAND NORTH BREAKWATER. Fl. W., 4 sec. U.	On breakwater near outer end.		45	10
1536	HOLLAND RANGE FRONT. Fl. R., 4 sec. U.	42 46.4	86 12.0	45	7
1537	HOLLAND RANGE REAR. F. R.	On outer end of south pier, 885 feet 80½° from front light.		52	15
<b>LAKE MACATAWA</b>					
1538	LAKE MACATAWA. F. R. U.	On south pier at entrance to lake.		20	10
1539	Lake Macatawa Lighted Buoy 1A. Fl. W., 4 sec. U.	In 21 feet		10	
1540	MIDDLE GROUND 1. Fl. W., 4 sec. U.	On southeast point of shoal.		23	10

## MICHIGAN

No.	Candlepower Apparatus Dfluminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1330.3		Light 1 sec., eclipse 1 sec.	Feet	Year
1330.7		Maintained by the Consumers Power Company, Jackson, Mich.		1949
1531	2,500,000 Rf e	Flash 0.1 sec., eclipse 9.9 sec.		1931
1532	210 300 mm a	Maintained from sunset to 9 p. m. each night by board of county road commissioners, Muskegon, Mich. Flash 0.4 sec.	White skeleton tower, on concrete base.	1911 1921
1533	1,200 6 e	DIAPHONE, air; group of 2 blasts every 30 sec.; blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec. RADIOBEACON: Transmits on 314 kc, groups of 1 dot, 3 dashes (• — — — —). Antenna lead-in at light tower.	Lantern on gable end of red fog-signal building. Telephone and radiotelephone via Coast Guard Station. Storm warning signals shown at Coast Guard Station.	1871 1922
1534	F. 5,000 Fl. 30,000 4 e	Fixed light with 1 sec. flash every 30 sec.	Red cylindrical tower.	1839 1905
1334.1	18 150 mm e	Flash 0.4 sec.	Red. Spar station buoy.	
1334.3	75 150 mm e	Flash 0.4 sec.	Black. Spar station buoy.	
1334.5	16 150 mm e	Flash 0.4 sec.	Red. Spar station buoy.	
1334.7	75 150 mm e	Flash 0.4 sec.	Black. Spar station buoy.	
1334.9	75 150 mm e	Flash 0.4 sec.	Black. Spar station buoy.	
1535	110 200 mm a	Flash 0.4 sec.	White skeleton tower on 4 cylinders.	1932
1536	45 300 mm a	Flash 1 sec.	Red skeleton tower.	1907 1933
1537	5,000 4 e	HORN, diaphragm, chime, air; blast 3 sec., silent 27 sec.	Red square tower, fog signal building.	1907 1936
1538	150 300 mm e	Not visible westward.	Storm warning signals shown daytime only at Coast Guard Station.	1928
1539	40 150 mm e	Flash 0.4 sec.	Red pyramidal tower.	
1540	170 300 mm a	Flash 0.4 sec.	Black.	
			White skeleton tower on cylindrical concrete base.	1909 1922

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE MACATAWA</b>					
1541	DRAKE POINT 2 Fl. R., 4 sec. U.	On point of shoal		Feet 23	7
1542	Lake Macatawa Lighted Buoy 4. Fl. R., 4 sec. U.	In 18 feet		5	5
1543	POINT SUPERIOR 5 Fl. W., 4 sec. U.	Off point		23	11
1544	Lake Macatawa Lighted Buoy 8. Fl. R., 4 sec. U.	In 18 feet		5	5
1545	GLOBE OIL REFINING COM- PANY DOCK OUTER. F. W. U.	On pile cluster off end of dock		11	-----
1546	GLOBE OIL REFINING COM- PANY DOCK INNER. F. W. U.	On pile cluster		11	-----
1545	Lake Macatawa Lighted Buoy 14. Fl. R., 4 sec. U.	In 18 feet		5	5
<b>SOUTH END</b>					
1546	SAGATWOK SOUTH PIERHEAD Fl. W., 4 sec. U.	On outer end of pier 42 40.6      86 13.0		31	10
1545	SOUTH HAVEN NORTH PIER. Fl. W., 4 sec. U.	On outer end of pier 42 24.1      86 17.3		28	-----
1547	SOUTH HAVEN PIERHEAD RANGE FRONT. F. R. U.	On south pier, 30 feet from outer end. 42 24.0      86 17.3		37	13
1548	SOUTH HAVEN RANGE REAR. F. R. U.	800 feet 81° from front light.		52	15
1549	St. JOSEPH PIERHEAD RANGE FRONT. F. W. U.	On outer end of north pier. 42 06.9      86 29.7		31	12
1550	St. Joseph Pierhead Range Rear. F. W. U.	315 feet 108° from front light.		53	15
1551	St. JOSEPH SOUTH PIERHEAD. Occ. R., 2 sec. U.	On pier, near outer end		53	10
1552	MICHIGAN CITY BREAK- WATER. Fl. R., 4 sec. U.	On north end of breakwater.		36	7
1553	MICHIGAN CITY BREAK- WATER SOUTH. Fl. W., 4 sec. U.	On southerly end of outer breakwater.		32	10

## MICHIGAN AND INDIANA

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1541	45 300 mm a	Flash 0.4 sec	Feet Red skeleton tower on cylin- drical concrete base. 18	Year 1909 1929
1542	15 150 mm e	Flash 0.4 sec	Red. Spar station buoy.	
1543	200 300 mm a	Flash 0.4 sec	White skeleton tower on cylindrical concrete base. 18	1909 1922
1544	15 150 mm e	Flash 0.4 sec	Red. Spar station buoy.	
1545	100 150 mm e	Maintained by Globe Oil and Refining Co., Chicago, Ill.		1947
1546	100 150 mm e	Flash 0.4 sec	Red. Spar station buoy.	
1546	140 200 mm e	Flash 0.4 sec HOEN, diaphragm, electric; blast 1.5 sec., silent 13.5 sec.	Red square column on pedes- tal. 26	1907 1940
1545	90 200 mm e	Flash 0.4 sec	White skeleton tower.	1940
1547	1,000 5 e	DIAPHONE, air; 2 blasts every 30 sec., blast 1.5 sec., silent 3 sec., blast 1.5 sec., silent 24 sec. Bell; 1 stroke every 20 sec., if diaphone disabled.	Red conical tower. 35	1872 1913
1548	7,000 Rf e	-----	Red skeleton tower.	1916
1549	5,000 5 e	-----	White cylindrical tower. 30	1846 1907
1550	17,000 4 e	DIAPHONE, air; blast 2 sec., silent 18 sec.	White octagonal tower at- tached to fog-signal build- ing. 53	1898 1908
1551	120 275 mm a	Light 1 sec., eclipse 1 sec.	Red skeleton tower, concrete base. 48	1919
1552	30 200 mm a	Flash 0.4 sec	Red pyramidal structure. 32	1904 1911
1553	140 200 mm e	Flash 0.4 sec	Black skeleton tower.	1941

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH END</b>					
1554	Michigan City East Pierhead. F. W.	On pier near outer end..... 41 43.7                      86 54.7		55	15
1555	MICHIGAN CITY WEST PIER- HEAD. F. R., 6 sec.	On pier, near outer end.....		41	8
1556	MICHIGAN CITY OUTER BA- SIN. F. G.	South side of entrance to Outer Basin.		25	8
1557	BURNS DITCH EAST PIER..... F. G.	East side of entrance to Burns Ditch, 8 miles east of Gary, Ind.		8	7
1558	BURNS DITCH WEST PIER..... F. R.	West side of entrance to Burns Ditch, 8 miles east of Gary, Ind.		8	7
1559	BURNS DITCH WEST PIER INNER. F. W.	On west pier, 8 miles east of Gary, Ind.		20	10
1560	Indiana Shoal Lighted Gong Buoy #. Fl. W., 4 sec.	In 42 feet, on northeast end of shoals.		13	10
1561	Gary Breakwater..... Gp. Fl. R., 40 sec. 3 flashes.	On end of breakwater..... 41 38.0                      87 19.5		40	15
1562	GARY EAST PIERHEAD RANGE FRONT. F. W.	On outer end of pier.....		30	8
1563	GARY EAST PIERHEAD RANGE REAR. F. G.	On east bridge tower, 175 feet 131° from front light.		45	6
1564	GARY WEST PIERHEAD..... F. R.	On outer end of pier.....		25	4
<b>WEST SIDE</b>					
1565	BUFFINGTON BREAKWATER..... F. R.	At east end of north break- water.		48	14
1566	BUFFINGTON PIERHEAD..... F. W.	Near easterly end of south pier.		48	14
1567	BUFFINGTON HARBOR RANGE FRONT. F. G.	On wharf.....		42	12
1568	BUFFINGTON HARBOR RANGE REAR. F. G.	1,000 feet 236½° from front light.		61	11

## INDIANA

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1554	5,000 5 e	HORN, diaphragm, chime, air; blast 2 sec. silent 18 sec.	Feet White, red roof, octagonal tower attached to fog sig- nal building.	Year 1904
1555	50 300 mm a	Flash 1 sec.....	Red skeleton tower on con- crete base	1904
1556	160 150 mm e	-----	33 Post on pier.	1931 1941
1557	45 200 mm e	Maintained by Gary Boat Club, Inc.	White pipe.	1942
1558	45 200 mm e	Maintained by Gary Boat Club, Inc.	White pipe.	1942
1559	150 200 mm e	Maintained by Gary Boat Club, Inc.	White pipe.	1942
1560	140 200 mm e	Flash 0.4 sec..... GONG, on buoy. Radar Reflector.	Red. Spar station buoy.	
1561	11,000 500 mm e	Flash 2 sec., eclipse 8 sec., flash 2 sec., eclipse 8 sec., flash 2 sec., eclipse 18 sec., Light 2 sec., eclipse 2 sec., in event of failure of main light.	Red cylindrical tower.	1911 1931
1562	60 Li e	HORN, diaphragm, air; blast 2 sec., silent 28 sec. Maintained by Carnegie- Illinois Steel Corp., Chi- cago, Ill.	White pipe standard.	1908
1563	20 Li e	Maintained by Carnegie- Illinois Steel Corp., Chi- cago, Ill.	White pipe standard.	1908
1564	10 Li o	Maintained by Carnegie- Illinois Steel Corp., Chi- cago, Ill.	Red pipe standard.	1908 1931
1565	4,500 e	Maintained by the Uni- versal Atlas Cement Co.	Red conical tower on con- crete base.	1926
1566	1,900 e	DIAPHONE, air; blast 1 sec., silent 9 sec. Maintained by Universal Atlas Cement Co.	White square skeleton tower on concrete base.	1927
1567	250 o	Light shows a circle. Main- tained by Universal Atlas Cement Co.	Black and white circular day- mark, on steel mast.	1927 1936
1568	200 e	Light shows V-shape. Maintained by Universal Atlas Cement Co.	Black and white triangular daymark on building.	1927 1936

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>INDIANA HARBOR</b>					
1569	INDIANA HARBOR EAST BULKHEAD. F. R. U.	On east corner of bulkhead...		Feet 48	7
1570	INDIANA HARBOR NORTH BULKHEAD. F. R. U.	On north corner of bulkhead...		48	7
1571	Indiana Harbor East Breakwater. Fl. W., 7.5 sec.	On north end of breakwater... 41 40.9	87 26.5	78	17
1572	INDIANA HARBOR EAST BREAKWATER INNER. F. G. U.	On crib, at angle of breakwater.		58	15
1573	INDIANA HARBOR WEST BREAKWATER. F. R., 10 sec. U.	On breakwater near easterly end.		48	8
1574	INDIANA HARBOR EAST PIERHEAD. Occ. G., 8 sec. U.	On east side of entrance to harbor.		45	14
<b>CALUMET HARBOR</b>					
1575	HAMMOND INTAKE CRIB..... Fl. W., 6 sec. U.	On Intake crib.....		39	8
1576	CALUMET PARK 101ST STREET PIER. F. G. U.	Outar end of pier.....		33	13
1577	CALUMET PARK 98TH STREET. F. R. U.	On Coast Guard Tower.....		59	13
1578	Calumet East Shoal Lighted Bell Buoy 4. Fl. R., 4 sec.	In 29 feet, 8,600 feet 06° from Calumet Harbor Light.		11	7
1579	Calumet Northeast Shoal Lighted Bell Buoy 2. Fl. R., 4 sec.	In 29 feet, 12,050 feet 52° from Calumet Harbor Light.		11	7
1580	Calumet Bor Lighted Bell Buoy 2. Fl. R., 4 sec.	In 24 feet, on southeasterly end of bar.		11	7
1581	CALUMET HARBOR BREAKWATER SOUTH END. Fl. W., 3 sec. U.	On southeast end of south breakwater.		50	14
1582	Calumet Harbor Lighted Buoy 1. Fl. W., 4 sec.	In 24 feet, on south side of entrance to Calumet Harbor.		8	9
1583	CALUMET HARBOR ENTRANCE SOUTH SIDE. Fl. G., 4 sec. U.	On northwest end of south breakwater.		59	8

## INDIANA AND ILLINOIS

No.	Candlepower Apparatus illumina	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1569	160 200 mm c	Maintained by Inland Steel Co.	Feet Red pyramidal tower.	Year 1935
1570	40 200 mm a	Maintained by Inland Steel Co.	Red pyramidal tower.	1935
1571	60,000 4 e	Flash 1 sec., eclipse 6.5 sec., DIAPHONE, air; group of 2 blasts every 20 sec.; blast 1 sec., silent 2 sec., blast 1 sec., silent 16 sec.	Cream-colored square tower on concrete base.	1935
1572	200 1,100 300 mm e	Winter light, Fl. W., 4 sec., flash 0.4 sec. Building is flood lighted.	Red brick square structure. Telephone at this station.	1920
1573	70 300 mm a	Flash 1 sec.	Red skeleton tower on concrete base.	1923
1574	2,500 200 mm e	Light 4 sec., eclipse 2 sec.	White skeleton tower on concrete base.	1920
1575	70 200 mm a	Flash 1 sec. Maintained by City of Hammond.	Black skeleton tower.	1927
1576	450 300 mm e		White skeleton tower on cylinders.	1937
1577	450 300 mm e		Skeleton tower. Storm warning signals shown at Coast Guard station at Calumet Park.	1937
1578	30 200 mm a	Flash 0.4 sec. BELL, on buoy.	Red. Spar station buoy.	
1579	30 200 mm a	Flash 0.4 sec. BELL, on buoy.	Red. Spar station buoy.	
1580	30 200 mm a	Flash 0.4 sec. BELL, on buoy.	Red. Spar station buoy.	
1581	6,000 4 e 200 200 mm e	Flash 1 sec., eclipse 2 sec., HORN, diaphragm, air; blast 2 sec., silent 13 sec. Winter light, Fl. W., 4 sec., flash 0.4 sec.	Cream colored square skeleton tower, lower half open.	1935 1936
1582	110 200 mm a	Flash 0.4 sec.	Black. Spar station buoy.	
1583	70 375 mm a	Flash 0.4 sec.	White skeleton tower.	1935

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CALUMET HARBOR</b>					
1584	Calumet Harbor..... Gp. Fl. R., 30 sec. 3 flashes. Radiobeacon. Distance-Finding Station.	On southeast end of north breakwater. 41 44.3	87 30.5	51	14
1585	Calumet Harbor Lighted Buoy 9. Fl. G., 4 sec.	In 26 feet at turn in channel..		10	---
1585	CALUMET PIERHEAD..... (SOUTH CHICAGO.) P. R.	On outer stub end of north pier.		39	13
1586	TORRENCE AVENUE..... Fl. W., 4 sec. U.	On parapet of bridge at mile 325.7		38	---
1585	SPENCER CHEMICAL PUMP- ING STATION. U. Occ. W., 1.8 sec.	At mile 325.2.....		24	---
1587	LITTLE CALUMET RIVER 3... Fl. W., 4 sec. U.	At mile 324.0.....		25	---
1588	LITTLE CALUMET RIVER 4... Fl. W., 4 sec. U.	At mile 323.7.....		23	---
<b>WEST SIDE</b>					
1589	NORTH SLIP SOUTH..... F. E. U.	South side of entrance to slip. 41 44.3	87 31.8	54	8
1500	NORTH SLIP RANGE FRONT... F. G. U.	At entrance to north slip... 41 44.4	87 31.8	60	7
1501	NORTH SLIP RANGE REAR... F. G. U.	On 5th stack from south end of No. 2 open-hearth plant, 2,625 feet, 288 $\frac{1}{2}$ ° from front light.		140	7
1502	FILTRATION PLANT BREAK- WATER SOUTH END. U. Fl. E., 5 sec.	On south end of breakwater..		39	12
1503	FILTRATION PLANT BREAK- WATER NORTH END. U. Fl. R., 3 sec.	On north end of breakwater..		39	12
<b>CHICAGO HARBOR</b>					
1504	JACKSON PARK YACHT HAR- BOR OUTER. U. Fl. E., 3 sec.	On outer end of pier.....		32	8
1505	JACKSON PARK YACHT HAR- BOR MIDDLE. U. Fl. E., 3 sec.	On inner end of pier, Jackson Park, Chicago.		38	8
1506	JACKSON PARK YACHT HAR- BOR NORTH SIDE. U. F. E.	On north side of entrance to yacht harbor, Jackson Park.		37	8

## ILLINOIS

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1584	13,000 4 o	3 flashes 1 sec. each, 2 eclipses 4 sec. each, 1 eclipse 19 sec. Winter light; fixed red. DIAPHONE, air; group of 3 blasts every 30 sec.; 3 blasts 1 sec. each, 2 silences 2 sec. each, 1 silence 23 sec. RADIOBEACON: Transmits on 286 kc, groups of dash, dot, dash (--- • ---). An- tenna lead-in at light tower.	Foot Buff cylindrical tower at- tached to fog-signal build- ing on concrete pier. 1906 50 1924 Telephone at this station.	Year
1585	30 200 mm e	Flash 0.4 sec.....	Black.	
1585	800 6 e	DIAPHONE, air; blast 2 sec., silent 18 sec. Bell, 1 stroke every 20 sec., if diaphone is disabled.	Red cylindrical tower. 35	1873 1923
1586	40 150 mm e	Flash 0.4 sec.....	On bridge.	1930
1585	250 mm e	Light 0.9 sec., eclipse 0.9 sec. Maintained by Spen- cer Chemical Co., Pitts- burg, Kansas.	On building.	1948
1587	40 150 mm e	Flash 0.4 sec.....	White skeleton tower.	1930
1588	40 150 mm e	Flash 0.4 sec.....	White skeleton tower.	1930
1589	40	BELL, hand. Maintained from April 1 to Dec. 15 by Carnegie Illinois Steel Co. Range maintained by Car- negie Illinois Steel Co.	Black steel tower.	1938
1590	40 e		White diamond daymark on black steel tower.	1925
1591	40 e		White diamond daymark on black stack.	1925
1502	250 300 mm e	Flash 0.5 sec. Maintained by city of Chicago.	White skeleton tower.	1930
1503	250 330 mm e	Flash 1 sec. Maintained by City of Chicago.	White skeleton tower.	1939
1504	50 200 mm e	Flash 0.3 sec. Maintained by Chicago Park District from Mar. 31 to Dec. 1.	White skeleton tower.	1916 1937
1505	50 200 mm e	Flash 0.3 sec. Maintained by Chicago Park District from Mar. 31 to Dec. 1.	White skeleton tower.	1903 1937
1506	50 150 mm e	Maintained by Chicago Park District from Mar. 31 to Dec. 1.	White post.	1903



## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CHICAGO HARBOR</b>					
1507	JACKSON PARK YACHT HARBOR SOUTH SIDE. U. F. G.	On south side of entrance to yacht harbor, Jackson Park.		Feet 33	6
1508	FIFTY-NINTH STREET YACHT HARBOR NORTH PIER. U. F. R.	On outer end of pier.....		15	8
1509	SIXTY-EIGHTH STREET CRIB. Fl. R., 3 sec.	On Waterworks Crib, 2½ miles off Jackson Park, Chicago.		61	8
1600	Clemson Shoal Lighted Bell Buoy 4. Fl. W., 4 sec.	In 22 feet.....		11	9
1601	Morgans Reef Lighted Buoy 4. Fl. R., 4 sec.	In 21 feet.....		11	7
1602	BURNHAM PARK HARBOR. U. Fl. R., 3 sec.	On east side of entrance to Yacht Harbor.		49	11
1603	Chicago Harbor Outer Lighted Bell Buoy 1. Fl. G., 10 sec.	In 65 feet, 7 miles 71° from Chicago Harbor Lighthouse.		12	10
1604	Four-Mile Crib. Fl. W., 15 sec.	3.7 miles off Grant Park, Chicago.		66	15
1605	CHICAGO HARBOR OUTER BREAKWATER SOUTH END. U. Fl. R., 6 sec.	On breakwater, near south end.		48	14
1606	CHICAGO HARBOR ENTRANCE SOUTH SIDE. U. Occ. G., 4 sec.	At north end of breakwater, south side of main entrance to harbor.		48	7
1607	Chicago Harbor. Alt. Fl. W. and R., 20 sec. Radiobeacon. Distance-Finding Station.	At south end of north breakwater. 41 53.3                      87 35.4		82	17
1608	CHICAGO BREAKWATER SOUTH. U. Fl. R., 4 sec.	On south end of inner breakwater.		36	7
1609	SOUTHEAST GUIDE WALL. U. Occ. W., 2 sec.	On outer end of wall.....		48	14
1610	CHICAGO MUNICIPAL PIER No. 1. U. F. R.	On outer end.....		30	6
1611	CHICAGO MUNICIPAL PIER No. 2. U. Occ. R., 4 sec.	On southeast corner of pier.....		30	11

## ILLINOIS

No.	Candlepower Apparatus Luminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1597	50 150 mm e	Maintained by Chicago Park District from Mar. 31 to Dec. 1.	Feet Black post.	Year 1803
1598	50 50 e	Maintained by Chicago Park District from Mar. 31 to Dec. 1.	Storm warning signals shown at Coast Guard Station. Black pole.	1945
1599	60 300 mm e	Flash 1 sec..... BELL; 1 stroke every 12 sec. Maintained by City of Chicago, Ill.	Silver-gray lantern on red skeleton tower on stone crib. 50	1898 1923
1600	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1601	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1602	250 200 mm a	Flash 0.3 sec. Maintained by Chicago Park District from Mar. 31 to Dec. 1.	White skeleton tower. 44	1940
1603	130 300 mm e	Flash 1 sec..... BELL, on buoy.	Black. Spar station buoy.	
1604	700 150 mm e	Flash 1.2 sec., eclipse 13.8 sec. Flashing white light of 130 c. p. shown if regular light inoperative, flash 2 sec., eclipse 3 sec. BELL; 2 strokes every 20 sec. Stand-by hand-operated bell. Maintained by City of Chicago.	Silver-gray lantern on red skeleton tower on stone crib. 1892 1923	
1605	500 300 mm e	Flash 2 sec.....	Red skeleton tower on concrete base. 42	1923
1606	30 300 mm a	Light 2 sec., eclipse 2 sec. . .	White skeleton tower. 42	1918
1607	W. 140,000 R. 40,000 3 e	White flash 0.8 sec., eclipse 0.2 sec., red flash 0.8 sec., eclipse 0.2 sec. DIAPHRONE, air; group of 2 blasts every 30 sec.; blast 1 sec., silent 2 sec., blast 1 sec., silent 20 sec. RADIOBEACON: Transmits on 286 kc., groups of dot, dash, dot, dash (•—•—•—•—). Antenna lead-in at light tower.	Straw-colored conical tower. 68 Telephone at this station. Radiotelephone via Coast Guard Station.	1893 1919
1608	45 300 mm a	Flash 0.4 sec.....	Red skeleton tower. 33	1876 1926
1609	350 5 a	Light 1 sec., eclipse 1 sec. . . . BELL; 1 stroke every 10 sec.	White tower.	1938
1610	20 200 mm e	Maintained by City of Chicago, Ill.	Red skeleton tower.	1917
1611	250 300 mm e	Light 2 sec., eclipse 2 sec. Maintained by City of Chicago, Ill.	Black skeleton mast on concrete base. 28	1916

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>CHICAGO HARBOR</b>					
1612	CHICAGO MUNICIPAL PIER No. 3. F. R. U.	At outer end of Municipal Pier No. 3.		Feet 18	10
1613	PALMOLIVE BEACON..... Fl. W., 30 sec. U.	1.9 miles 293° from Chicago Harbor Light.		549	36
1614	CHICAGO OUTER BREAKWA- TER NORTHWEST END. U. Fl. W., 4 sec.	On breakwater, near north- west end, east side of gap.		55	10
1615	Carter H. Harrison Crib..... Gp. Fl. W., 15 sec.	On crib.....		69	15
<b>WEST SIDE</b>					
1616	DIVERSEY YACHT HARBOR RANGE FRONT. U. F. R.	Foot of Diversy Ave.....		30	-----
1617	DIVERSEY YACHT HARBOR RANGE REAR. U. F. W.	40 yards 270° from front light.		31	-----
1618	BELMONT YACHT HARBOR... Fl. R., 3 sec. U.	On north side of channel into harbor.		47	10
1619	MONTROSE BREAKWATER... Fl. R., 3 sec. U.	On easterly point of breakwa- ter, foot of Montrose Ave.		35	6
1620	MONTROSE HARBOR EAST BREAKWATER. U. Fl. R., 3 sec.	5.4 miles 332° from Chicago Harbor Light.		44	-----
1621	MONTROSE HARBOR WEST BREAKWATER. U. Fl. G., 3 sec.	On west side of entrance to harbor.		38	-----
1622	WILSON AVENUE BREAK- WATER. U. Fl. G., 3 sec.	On north end of breakwater...		36	7
1623	WILSON AVENUE INTAKE CRIB. F. W.	On crib, 3.5 miles 344° from Carter Harrison Crib.		65	7
1624	FOSTER AVENUE BREAK- WATER. U. Fl. W., 3 sec.	On end of breakwater.....		37	10
1625	Rogers Park Shoal Lighted Bell Buoy 6. Fl. R., 4 sec.	In 27 feet, on east side of shoal.		11	7
1626	Grossepoint..... Gp. Fl. W., 15 sec. U. 2 flashes.	On point..... 42 03.8                      87 40.5		119	20
1627	Grossepoint Outer Lighted Bell Buoy 4. Fl. R., 10 sec.	In 29 feet, east of shoal spot..		11	7

## ILLINOIS

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1612	100 150 mm e	Maintained by City of Chi- cago, Ill.	Feet Red skeleton tower.	Year 1926
1613	2 billion Rf e	Maintained by Palmolive Building Corp.		1930 1945
1614	110 200 mm a	Flash 0.4 sec.....	White skeleton tower. 50	1890 1906
1615	700 200 mm e	Flash 1 sec., eclipse 1 sec., flash 1 sec., eclipse 1 sec., flash 1 sec., eclipse 10 sec. Flashing white light of 130 c.p. shown if regular light inoperative, flash 1 sec., eclipse 2 sec. BELL; 1 stroke every 15 sec. Maintained by City of Chicago, Ill.	Silver-gray lantern on red skeleton tower on stone crib.	1900 1932
1616	100 e	Maintained by Chicago Park District from Apr. 1 to Dec. 1.	White pole.	1913
1617	100 e	Maintained by Chicago Park District from Apr. 1 to Dec. 1.	White pole.	1913
1618	120 L a	Flash 0.3 sec. Maintained by Chicago Park District from Apr. 1 to Dec. 1.	Red skeleton tower.	1916
1619	20 200 mm a	Flash 0.3 sec. Maintained by Chicago Park District.	Red skeleton tower on break- water.	1928
1620	200 mm a	Flash 1 sec. Maintained by Chicago Park District.	Red skeleton tower. 33	1935 1949
1621	200 mm a	Flash 1 sec. Maintained by Chicago Park District.	White skeleton tower. 33	1935 1949
1622	40 150 mm e	Flash 0.3 sec. Maintained by Chicago Park District.	White skeleton tower, in- closed base.	1931
1623	45 300 mm e	BELL; group of 2 strokes every 30 sec. Maintained by city of Chicago, Ill.	Silver-gray lantern on red cylindrical tower on stone crib.	1915 1923
1624	100 150 mm e	Flash 0.4 sec. Maintained by Chicago Park District.	White skeleton tower, in- closed base.	1931
1625	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1626	60,000 2 e	Flash 1.5 sec., eclipse 2 sec., flash 1.5 sec., eclipse 10 sec. Maintained by city of Evanston, Ill.	White, conical tower, red roofs. 110	1378
1627	30 200 mm a	Flash 1 sec..... BELL, on buoy.	Red. Spar station buoy.	

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
1628	WILMETTE SANITARY CHANNEL ENTRANCE. F. R. U.	On end of north pier at entrance to Wilmette Harbor.		40	5
1629	WILMETTE SANITARY CHANNEL INNER. F. R. U.	At north side of entrance to Wilmette Harbor.		35	5
1630	GREAT LAKES HARBOR RANGE FRONT. F. G. U.	On inner end of north pier. 42 18.5 87 49.9		22	11
1631	GREAT LAKES HARBOR RANGE REAR. F. G. U.	On side of bluff, 200 feet 302½° from front light.		37	13
1632	GREAT LAKES EAST BREAKWATER. Fl. R., 4 sec. U.	On breakwater, 60 feet from south end.		47	7
1633	GREAT LAKES SOUTH BREAKWATER. Fl. W., 4 sec. U.	On breakwater, 60 feet from easterly end.		45	10
1634	Waukegan Shoals Lighted Buoy 3. Fl. W., 4 sec. U.	In 28 feet, northeast of 18-foot shoal.		10	9
1635	Waukegan Harbor. Alt. Occ. W., and Gp. Fl. R., 40 sec., 4 flashes. U.	On outer end of south pier. 42 21.7 87 48.8		38	13
1636	WAUKEGAN BREAKWATER. Fl. R., 4 sec. U.	On southeast end of breakwater.		45	7
1637	PUBLIC SERVICE CO. BREAKWATER. Fl. R., 6 sec. U.	On end of north breakwater.		35	10
1638	JOHNS-MANVILLE INTAKE CRIB. Fl. W., 6 sec. U.	On crib.-----		38	8
1635	WAUKEGAN AVIATION. Fl. W., 10 sec. U.	5 miles 311° from Waukegan Light. 42 24.5 87 53.3		-----	-----
1639	KENOSHA SOUTH PIER. Fl. G., 4 sec. U.	450 feet 125° from Kenosha Light.		47	7
1640	KENOSHA BREAKWATER. Fl. R., 4 sec. U.	On southeast end of breakwater.		42	7
1641	Kenosha. Gp. Occ. R., 20 sec., 2 eclipses. U.	On end of north pier, 750 feet 263½° from preceding. 42 35.4 87 48.5		50	14

## ILLINOIS AND WISCONSIN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1628	15 e	Maintained by Sanitary District of Chicago.	Feet Red pole.	Year 1921
1620	15 e	SIREN, electric; 1 blast ev. 30 sec., blast 3 sec., silent 27 sec. Maintained by Sanitary District of Chicago.	Red pole.	1928
1630	4,900 e	Range maintained by Naval Training Center, Great Lakes, Ill.	White diamond shaped daymark.	1944
1631	4,900 e	-----	White diamond shaped daymark.	1944
1632	45 300 mm a	Flash 0.4 sec.-----	Red skeleton tower on concrete base.	1923
1633	170 300 mm a	Flash 0.4 sec.-----	White skeleton tower on concrete base.	1923
1634	140 200 mm e	Flash 0.4 sec.-----	Black. Spar station buoy.	
1635	W. 3,500 R. 9,600 4 e	White light 20.1 sec., eclipse 2.1 sec., 4 red flashes 0.7 sec. each, 3 eclipses 4.3 sec. each, 1 eclipse 2.1 sec. HORN, diaphragm, chimno, air; blast 2 sec., silent 18 sec.	White cylindrical tower attached to fog-signal building. 35	1599 1905
1636	30 200 mm a	Flash 0.4 sec.-----	Red skeleton tower on concrete base.	1905 1923
1637	140 150 mm e	Flash 1 sec. Maintained by Public Service Co.	Red skeleton tower.	1931
1638	60 200 mm a	Flash 1 sec. Maintained by Johns-Manville Inc.	White skeleton tower on crib.	1923
1635	2,000,000 R/e	Maintained by Administrator of Civil Aeronautics.		1949
1639	30 300 mm a	Flash 0.4 sec.-----	White skeleton tower on cylinders.	1937
1640	30 200 mm a	Flash 0.4 sec.-----	Red octagonal skeleton tower, inclosed base, on concrete base.	1900 1921
1641	1,000 5 e	Eclipse 1.5 sec., light 5 sec., eclipse 1.5 sec., light 22 sec. DIAPHONE, air; group of 3 blasts every 30 sec.; 3 blasts 1 sec. each, 2 silences 3 sec. each, 1 silence 21 sec.	Red cylindrical tower.	1856 1906
			Storm warning signals shown on old lighthouse tower.	

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
1642	<i>Racine Reef West End Lighted Buoy 1.</i> Fl. W., 4 sec.	In 30 feet, on western end of reef.		Feet 10	9
1643	<i>Racine Reef.</i> Fl. R., 5 sec.	On east side of reef----- 42 43.6                      87 44.2		72	16
1644	<i>RACINE SOUTH BREAKWATER.</i> Fl. W., 4 sec.                      U.	On end of breakwater-----		42	10
1645	<i>RACINE NORTH BREAKWATER.</i> F. R.	On end of breakwater----- 42 44.1                      87 46.2		53	15
1646	<i>RACINE NORTH PIERHEAD.</i> F. R.                      U.	On stub end of pier-----		31	12
1647	<i>RACINE AVIATION.</i> Fl. W., 10 sec.                      U.	3.2 miles, 245° from Wind Point Light. 42 46.0                      87 48.5			
1648	<i>Wind Point (Racine Point).</i> Fl. W., 30 sec.	On Wind Point----- 42 46.9                      87 48.5		111	19
1649	<i>Wind Point North Shoals Lighted Buoy 14.</i> Fl. W., 4 sec.	In 23 feet, on southeast end of shoals.		11	9
1650	<i>MILWAUKEE COUNTY AIRPORT.</i> Fl. W., 10 sec.                      U.	4.8 miles 181° from Milwaukee Breakwater Light-house. 42 57.1                      87 53.6		150	23
1651	<i>Milwaukee South Point Lighted Bell Buoy 1.</i> Fl. W., 4 sec.	In 30 feet, on easterly edge of shoal, 3¼ miles 135° from Milwaukee Breakwater Light.		11	9
1652	<i>SOUTH SHORE PARK BREAKWATER.</i> F. G.                      U.	On westerly end of south shore rubble mound protection.		16	10
1653	<i>MILWAUKEE SOUTH ENTRANCE.</i> Fl. R., 6 sec.                      U.	On north side of gap in breakwater.		42	8
1654	<i>MILWAUKEE BREAKWATER ENTRANCE SOUTH SIDE.</i> Occ. G., 2 sec.                      U.	On south breakwater, 10 yards from northerly end.		47	7
1655	<i>MILWAUKEE SOUTH PIERHEAD.</i> Fl. W., 4 sec.                      U.	On pier-----		41	10
1656	<i>MILWAUKEE PIERHEAD.</i> F. R.	On outer end off north pier----		45	14

## WISCONSIN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1642	140 200 mm o	Flash 0.4 sec.-----	Feet Black. Spar station buoy.	Year 1908
1643	25,000 4 e 50 200 mm o	Flash 0.4 sec., eclipse 4.6 sec. Light obscured from 81° to 103¼°. Winter light Fl. R., 4 sec. (flash 0.4 sec.). DIAPHONE, air; blast 3 sec., silent 27 sec. Winter fog signal; Siren, electric, blast 3 sec., silent 27 sec.	Brown and white octagonal tower on octagonal building on concrete pier. 86	1908
1644	170 300 mm n	Flash 0.4 sec.-----	White skeleton tower.	1917
1645	3,900 4 c	DIAPHONE, air; group of 2 blasts every 20 sec.; blast 1 sec., silent 2 sec.; blast 1 sec., silent 16 sec. Bell: group of 2 strokes every 20 sec., if diaphone is disabled.	Red square pyramidal skeleton tower, upper half enclosed. 46	1800 1923
1646	400 Fl e	-----	Red post. Storm warning signals shown at Coast Guard Station.	1918
1647	2,000,000 Rf e	Flash 0.1 sec. Maintained by Administrator of Civil Aeronautics.		
1648	150,000 3 e	Flash 3.6 sec., eclipse 26.4 sec. DIAPHONE, air; group of 2 blasts every 60 sec., blast 3 sec., silent 3 sec., blast 3 sec., silent 51 sec.	White conical tower connected to dwelling. 103	1880
1649	110 200 mm a	Flash 0.4 sec.-----	Red. Spar station buoy.	
1650	1,000,000 Rf e	Flash 0.1 sec., eclipse 9.9 sec. Maintained by Milwaukee County Highway Commission.		1931
1651	110 200 mm a	Flash 0.4 sec.----- BELL, on buoy.	Black. Spar station buoy.	
1652	1,000 200 mm e	Maintained by City of Milwaukee.	Pipe standard.	1932
1653	60 300 mm a	Flash 2 sec.-----	Red skeleton tower.	1929
1654	45 300 mm a	Light 1 sec., eclipse 1 sec.-----	White skeleton tower on concrete base.	1928
1655	130 300 mm a	Flash 0.4 sec.-----	White pyramidal shaft. Storm warning signals shown at sewage disposal plant.	1912
1656	1,700 5 e	BELL; 1 stroke every 10 sec.-----	Red cylindrical tower. 41	1872 1906

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
1657	Milwaukee Breakwater..... Occ. R., 6 sec. Radiobeacon. Distance-Finding Station.	On southeast end of north breakwater. 43 01.8                      87 52.9		Feet 67	16
1658	MILWAUKEE NORTH EN- TRANCE.                      U. Fl. G., 4 sec.	On end of pier at south side of the North Gap.		42	7
1659	North Point (Milwaukee)..... F. Fl. W., 30 sec.	On point, 2½ miles 12° from Milwaukee Breakwater Light. 43 03.9                      87 52.3		154	18 21
1660	PORT WASHINGTON SOUTH PROTECTION JETTY.        U. F. W.	-----		40	11
1661	PORT WASHINGTON SOUTH BREAKWATER.                U. Fl. G., 4 sec.	On outer end of south break- water.		48	6
1662	PORT WASHINGTON SOUTH PIER.                            U. F. G.	Marks offset in pier.....		34	9
1663	PORT WASHINGTON PIERHEAD F. R.	Near outer end of north stub pier at mouth of Sauk River. 43 23.2                      87 51.9		32	13
1664	Port Washington Breakwater. Fl. R., 7½ sec.	On southeasterly end of north breakwater.		78	18
1665	SHEBOYGAN GENERATING STATION INTAKE CRIB.    U. Fl. R., 3 sec.	In 15 feet, 1,500 feet off shore.		46	8
1666	Sheboygan Breakwater..... Occ. R., 4 sec.	On southeast end of break- water.		55	15
1667	SHEBOYGAN SOUTH PIER- HEAD.                            U. Fl. W., 4 sec.	On end of pier.....		40	10
1668	SHEBOYGAN NORTH PIER- HEAD.                            F. R.	On stub end of pier.....		31	8
1669	Sheboygan Marker Radio- beacon.	On shore at Coast Guard Lifeboat Station. 43 45.0                      87 42.2		-----	-----

## WISCONSIN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1657	5,000 4 e	Light 4.5 sec., eclipse 1.5 sec. Light is also shown when fog signal is in operation. DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 286 kc, groups of 2 dashes(---). Antenna lead-in at light tower.	Feet Black lantern on buff square structure. 53	Year 1926
1658	40 200 mm a	Flash 0.4 sec.....	Black skeleton tower.	1041
1659	F. 1,800 Fl. 300,000 4 e	Fixed light with 1.6 sec. Flash every 30 sec.	Buff, red roof, octagonal tower adjacent to dwelling. 74	1838 1912
1660	200 200 mm e	Maintained by Wisconsin Elec. Power Co.	Telephone at this station. On black mast.	1931
1661	20 200 mm a	Flash 0.4 sec.....	White skeleton tower on concrete base.	1934 1937
1662	80 e	Maintained by Wisconsin Elec. Power Co.	White mast.	1934
1663	1,400 300 mm e	-----	Red skeleton tower on cyl- inders.	1849 1940
1664	18,000 4 e	Flash 1 sec., eclipse 6½ sec.... DIAPHONE, air; group of 2 blasts every 30 sec., blast 1 sec., silent 2 sec., blast 2 sec., silent 25 sec.	Square cream-colored tower on concrete base. Telephone at this station. Storm warning signals shown daytime only on roof of Ubbink Coal Company's Bldg., north side of west inner basin.	1935
1665	70 150 mm e	Flash 0.3 sec.....	Red skeleton tower on cy- lindrical concrete intake well.	1931
1666	4,000 375 mm e	Light 3 sec., eclipse 1 sec.... HORN, diaphragm, air; blast 3 sec., silent 27 sec. Siren, electric, if horn is disabled.	Red cylindrical tower.	1915 50
1667	170 300 mm a	Flash 0.4 sec.....	White skeleton tower.	1015 36
1668	70 150 mm e	-----	Red post.	1916
1669	-----	RADIOBEACON: transmits on 294 kc., a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at lifeboat station.	-----	1942

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
1670	MANITOWOC SOUTH BREAK- WATER U. Fl. W., 4 sec.	On end of breakwater.....		41	10
1671	Manitowoc Breakwater..... Fl. R., 6 sec. Radio beacon. Distance-Finding Station.	On south end of north break- water. 44 05.6                      87 38.6		52	15
1672	MANITOWOC PIERHEAD..... F. R.                      U.	On end of north pier.....		42	12
1673	TWO RIVERS SOUTH PIER- HEAD. U. Fl. W., 4 sec.	On outer end of south pier- head.		27	9
1674	TWO RIVERS NORTH PIER- HEAD. F. R.	On outer end of north pier...		35	13
1675	Twin River Point..... F. Fl. W., 30 sec.	On Rawley Point..... 44 12.6                      87 30.6		113	19
1676	KEWAUNEE SHOAL..... Fl. W., 4 sec.                      U.	44 27.0                      87 28.0		51	14
1677	Kewaunee Pierhead..... F. W. Radio beacon. Distance-Finding Station.	On outer end of south pier... 44 27.5                      87 20.5		45	14
1678	KEWAUNEE BREAKWATER.... Fl. R., 4 sec.                      U.	630 feet 065 1/2° from Kewaunee Pierhead Light.		55	7
1679	KEWAUNEE NORTH PIER- HEAD. U. Fl. R., 4 sec.	On pier, near outer end.....		45	7
1680	Algoma Pierhead..... Occ. R., 4 sec.	On end of north pier.....		48	14
1681	ALGOMA INNER..... F. R.	At angle of north pier.....		28	12

## WISCONSIN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1670	110 200 mm a	Flash 0.4 sec.....	Feet White pyramidal shaft on pedestal.	Year 1895 1912
1671	2,000 4 0	Flash 2 sec..... DIAPHONE, air; group of 2 blasts every 20 sec.; blast 1 sec., silent 1 sec., blast 1 sec., silent 17 sec.  RADIOBEACON: Transmits on 302 kc, groups of 3 dashes (---). An- tenna lead-in at light tower.	37 Buff cylindrical tower on fog- signal building.	1895 1918  Telephone at this station. Storm warning signals shown at foot of North 7th Street. DISTANCE-FINDING STA- TION. For method of oper- ation see p. 11.
1672	250 300 mm e		Red skeleton tower on con- crete base.	1839 1949
1673	90 200 mm e	Flash 0.4 sec.....	White skeleton tower.	1940
1674	800 6 e	DIAPHONE, air; blast 1 sec., silent 14 sec.	Red square pyramidal frame- work tower.	1886 1928
1675	F. 16,000 Fl. 110,000 3 e	Fixed light with 3.6 sec. flash every 30 sec. DIAPHONE, air; blast 4 sec., silent 56 sec.	Storm warning signals shown at Coast Guard Station. White octagonal skeleton tower enclosing stair cylin- dar.	1863 1894 111 Telephone at this station.
1676	1,500 375 mm e	Flash 0.4 sec..... SIREN, electric; blast 5 sec., silent 10 sec.	On skeleton tower.	1937 45
1677	5,000 5 e	DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 314 kc, groups of 2 dashes, 1 dot (---.). Antenna lead-in at light tower.	White square tower on fog- signal building.	1891 1931 43 Telephone at this station. DISTANCE-FINDING STA- TION. For method of oper- ation see p. 11.
1678	40 300 mm a	Flash 0.4 sec.....	Skeleton tower.	1936 53
1679	30 200 mm a	Flash 0.4 sec.....	Red skeleton tower on cylin- ders.	1913 1936 42
1680	3,000 5 e	Light 2 sec., eclipse 2 sec.... DIAPHONE, air; group of 3 blasts every 30 sec., 3 blasts 1 sec. each, 2 sil- lences 1 sec. each, 1 silence 25 sec.	Red cylindrical tower.	1893 1932 46 Telephone at this station.
1681	500 Pl e		Red skeleton tower.	1893 1932 22

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
1682	STURGEON BAY CANAL PIER- HEAD. F. R. Radiobeacon. Distance-Finding Station.	On end of north pier..... 44 47.6	87 18.6	40	13
1683	Sturgeon Bay Canal..... Alt. Fl. W. and R., 20 sec.	On the north side of entrance to canal from Harbor of Refuge. 44 47.7	87 18.8	107	19
1684	STURGEON BAY CANAL 2..... F. R.	On northeast side of entrance to canal from Harbor of Refuge.		11	8
<b>STURGEON BAY</b>					
1685	STURGEON BAY 3..... Fl. W., 4 sec. U.	6,200 feet northwest from Light No. 2.		19	10
1686	STURGEON BAY 12..... Fl. R., 4 sec. U.	5,500 feet northwest from Light No. 3.		21	7
1687	Sturgeon Bay Lighted Buoy 18. Fl. R., 4 sec.	In 22 feet, at bend in channel 1,700 feet southeast of Lawrence Avenue Bridge.		10	7
1688	DUNLAP REEF NORTHWEST END 21. Fl. W., 4 sec. U.	In 12 feet, on north end of shoal.		23	10
1689	HILLS POINT 25..... Fl. W., 4 sec. U.	On point, close to shore line..		40	10
1690	Hills Point Lighted Buoy 24. Fl. R., 4 sec.	In 18 feet, east side of channel..		13	7
1691	STURGEON BAY 26..... Fl. R., 4 sec. U.	In 18 feet, east side of channel..		34	7
1692	Sturgeon Bay Lighted Buoy 28. Fl. R., 4 sec.	In 23 feet, marks entrance to Sturgeon Bay Channel from Green Bay side.		10	7
<b>WEST SIDE</b>					
1692.5	Jacksonport Shoal Gong Buoy 2.	In 24 feet..... 44 57.9	87 09.2		
1693	BAILEYS HARBOR RANGE FRONT. F. W. U.	On north shore of harbor.....		21	11
1694	BAILEYS HARBOR RANGE REAR. F. W. U.	650 feet 330½° from front light. 45 04.4	87 07.2	36	13
1695	Baileys Harbor Bell Buoy.....	In 42 feet, in entrance to har- bor.			

## WISCONSIN

No.	Candlepower Apparatus Fluorescent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1682	1,700 5 e	DIAPHONE, air; group of 2 blasts every 30 sec., blast 2 sec., silent 2 sec., blast 1 sec., silent 25 sec.	Red cylindrical tower at- tached to fog-signal build- ing. 39	Year 1882 1903
		RADIOBEACON; Transmits on 290 kc, groups of 3 dashes, 1 dot (--- --- ●). Antenna lead-in on shore, 1,455 feet 316° from pier- head lighthouse.	Telephone and radiotelephone via Coast Guard Station.	DISTANCE-FINDING STA- TION. For method of op- eration see p. 11.
1683	W. 250,000 R. 70,000 3 e	White flash 1.3 sec., eclipse 8.7 sec., red flash 1.3 sec., eclipse 8.7 sec.	White cylindrical tower. 1899 98	
1684	50 L e		Storm warning signals shown at foot of Nebraska St., Sturgeon Bay. Red square inclosed wooden structure. 8	1896
1685	170 300 mm a	Flash 0.4 sec.....	White skeleton tower on pier. 15	1896 1916
1686	30 200 mm a	Flash 0.4 sec.....	Red skeleton tower on orb. 15	1896 1916
1687	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1688	170 300 mm a	Flash 0.4 sec.....	Black skeleton tower, cylin- drical base.	1924
1689	170 300 mm a	Flash 0.4 sec.....	White skeleton tower.	1924
1690	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1691	45 300 mm a	Flash 0.4 sec.....	Red skeleton tower.	1925 1931
1692	30 200 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	
1692.5		GONG, on buoy.....	Red, red reflector.	
1693	5,000 300 mm e		White square tower. 21	1870
1694	4,000 5 e		White square tower attached to dwelling. 30	1853 1870
1695		BELL, on buoy.....	Black and white vertical stripes.	

## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>STURGEON BAY</b>					
1696	Cana Island..... Occ. W., 10 sec. U.	On island, between Balloys Harbor and North Bay. 45 05.3	87 02.8	Feet 83	17
1697	Porte des Morts Entrance Lighted Bell Buoy. S-L. Fl. W.	In 65 feet, 3.8 miles 163° from Pilot Island Light.		11	9
1698	Pilot Island..... Occ. W., 6 sec.	In Porte des Morts Passage-- 45 17.1	86 55.2	48	14
1699	Waverly Shoal Lighted Bell Buoy 5. Fl. G., 4 sec.	In 20 feet.....		11	6
1700	PLUM ISLAND RANGE FRONT. F. R.	On southwest side of island..		36	13
1701	PLUM ISLAND RANGE REAR. F. R. Radiobeacon.	1,850 feet 331° from front light. 45 18.5	86 57.5	80	17
1702	Detroit Harbor Lighted Bell Buoy 1. Fl. W., 4 sec.	In 20 feet, in entrance to har- bor from Detroit Island Passage.		11	9
1703	Detroit Harbor Channel Light- ed Buoy 4. Fl. R., 4 sec.	In 17 feet, on east side of channel at turn.		5	8
1704	Fisherman Shoal Lighted Bell Buoy 6. Fl. W., 4 sec.	In 35 feet, on southeast part of shoal.		11	9
<b>WEST SIDE</b>					
1706	Pottawatomi..... Fl. W., 4 sec. U.	On northwest point of Rook Island. 45 26.7	86 49.7	169	15
1706	Rock Island Passage Lighted Gong Buoy R1. S-L. Fl. W.	In 79 feet, marks junction of courses at east entrance to Rock Island Passage.		13	10
1707	St. Martin Island..... Alt. Fl. R. and W., 10 sec. Radiobeacon. Distance Finding Station.	On northeast end of island... 45 30.2	88 45.5	84	17

## WISCONSIN AND MICHIGAN

No.	Candlepower Apparatus Influent	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1696	8,000 3 e 2,000 3 a	Light 5 sec., eclipse 5 sec.-- Winter light, Fl. W., 6 sec.	Feet 86	Year 1870
1697	110 200 mm a	A short flash and a long flash. BELL, on buoy.		Black and white vertical stripes. Spar station buoy.
1698	15,000 4 e 130 200 mm a	Light 4 sec., eclipse 2 sec.-- Winter light; Fl. W., 5 sec. DIAPHONE, air; blast 3 sec., silent 27 sec.	41	1850 1858
1699	20 200 mm a	Flash 0.4 sec..... BELL, on buoy.		Yellow, red roofs, square tower attached to dwelling. Telephone via Plum Island Coast Guard Station. Black. Spar station buoy.
1700	1,800 6 e	-----		White, square base, octag- onal top. 1897
1701	4,000 4 e	HORN, diaphragm air; group of 2 blasts every 30 sec.; blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec. RADIOBEACON: Transmits on 312 kc., single dashes (--- etc.). Antenna lead-in 1,300 feet north of rear light at fog signal building.	65	1897 Telephone via Coast Guard station. Storm warning signals shown at Coast Guard Station.
1702	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.		Black. Spar station buoy.
1703	90 150 mm e	Flash 0.4 sec.....		Red. Spar station buoy.
1704	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.		Red. Spar station buoy.
1706	700 200 mm e	Flash 0.4 sec.....		Gray square tower attached to dwelling. 1837 41 1858
1706	140 200 mm e	A short flash and a long flash. GONG, on buoy. Radar Reflector.		Black and white vertical stripes. Spar station buoy.
1707	140,000 4 e	Red flash 0.2 sec., eclipse 4.8 sec., white flash 0.2 sec., eclipse 4.8 sec. Light is visible from 135° to 355°, dark sector covering island. HORN, diaphragm, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 308 kc, groups of dash, dot, dash, dot (--- • --- e). Antenna lead-in at light tower.	75	1905 Telephone at this station. DISTANCE-FINDING STA- TION. For method of operation see p. 11.



## LAKE MICHIGAN

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>WEST SIDE</b>					
1708	Little Gull Island Lighted Bell Buoy E. Fl. W., 4 sec.	In 54 feet, off south point of shoal.		Feet 11	0
<b>NORTH END</b>					
1709	Poverty Island..... Fl. R., 10 sec.	On south part of island..... 45 31.3                      86 40.0		80	17
1710	Point Detour Lighted Buoy S... Fl. R., 4 sec.	In 28 feet, marks south end of shoal extending southward from Point Detour.		10	9
1711	Wiggins Point Shoal Lighted Bell Buoy A. Fl. W., 4 sec.	In 30 feet, on east end of shoal off point.		11	9
1712	MANISTIQUE WEST BREAKWATER. Fl. W., 4 sec. U.	On south end of breakwater..		36	10
1713	MANISTIQUE WEST PIERHEAD Qk. Fl. W. U.	On south end of pier.....		24	10
1714	Manistique..... F. R. Radiobeacon.	On east breakwater, near outer end. 45 56.7                      86 14.8		50	14
1715	Seul Choix Pointe..... Gp. Fl. W., 15 sec. 2 flashes.	On end of point..... 45 55.3                      85 54.6		80	17
1716	Port Inland Lighted Bell Buoy E. Fl. W., 4 sec.	In 86 feet off entrance to port.		11	9
1717	PORT INLAND..... Fl. R., 5 sec. U.	On southwesterly end of east pier.		48	10
1718	Port Inland Marker Radiobeacon.	On shore, 270 feet 0° from Port Inland Outer Range Rear Light. 45 58.3                      85 52.6			
1719	PORT INLAND OUTER RANGE FRONT. F. R. U.	On shore 2,375 feet 349° from Port Inland Light.		25	10
1720	PORT INLAND OUTER RANGE REAR. F. R.	300 feet north of front light..		41	10

## MICHIGAN

No.	Candlepower Apparatus Emitting	Light characteristic Fog signal	Structure, Fresnel or buoy	
			Top of lantern above ground	Established Rebuilt
1708	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Feet Red. Spar station buoy.	Year 1874
1709	1,000 4 lov	Flash 2.5 sec., eclipse 7.5 sec. DIAPHONE, air; group of 2 blasts every 30 sec.; blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec.	White, red roofs, conical tower connected to dwelling. 70 Telephone at this station.	1874
1710	100 300 mm a 100 200 mm e	Flash 0.4 sec..... Winter light, Fl. W., 10 sec. (flash 1 sec.).	Red. Spar station buoy.	
1711	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1712	170 300 mm a	Flash 0.4 sec.....	White skeleton tower.	1914
1713	110 200 mm a	60 flashes per minute.....	White tower, inclosed base.	1914 1925
1714	2,000 4 a	DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 296 kc, groups of dot, dash, dot, dash (• — • — • —). Radiobeacon is on shore end of breakwater, 1,000 feet 69° from Manistique West Pierhead Light.	Red tower on concrete base. Telephone at this station.	1915 1916
1715	18,000 3 e	Flash 3 sec., eclipse 2 sec., flash 3 sec., eclipse 7 sec. DIAPHONE, air; group of 2 blasts every 30 sec.; blast 1.5 sec., silent 2 sec., blast 1.5 sec., silent 25 sec.	White conical tower connected to red brick dwelling. 77 Radiotelephone at this station.	1892
1716	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1717	150 200 mm e	Flash 1 sec..... HORN, air; blast 2 sec., silent 10 sec. Maintained by Inland Lime & Stone Co.	Red skeleton tower.	1931
1718		RADIOBEACON: Transmits on 312 kc., a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec.		1943
1719	100 e	Range maintained by Inland Lime & Stone Co.	Orange and white square daymark on post.	1935
1720	100 e		Orange and white square daymark on post.	1935

## LAKE MICHIGAN AND GREEN BAY

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH END</b>					
1721	PORT INLAND INNER RANGE FRONT. U. F. R.	On inner end of breakwater.		Feet 27	10
1722	PORT INLAND INNER RANGE REAR. U. F. R.	625 feet 47° from front light.		40	10
1723	Boulder Reef Lighted Whistle Buoy 1. Fl. W., 4 sec.	In 33 feet on southwest side of reef.		14	10
1724	GULL ISLAND. Fl. W., 10 sec. U.	On dry shoal northwesterly from Gull Island.		77	16
1725	Lansing Shoal. Oco. W., 15 sec. Radiobeacon. Distance-Finding Station.	In 25 feet, south of shoal. 45 42.7      85 50.8 45 54.2      85 33.7		69	16
1726	Garden Island Shoal Lighted Bell Buoy 1. Fl. W., 4 sec.	In 22 feet, marks northeast- erly end of easterly shoal.		11	9
1727	NAUBINWAY ISLAND. Fl. W., 4 sec. U.	46 04.5	85 26.7	32	10
<b>GREEN BAY</b>					
<b>NORTH END</b>					
1728	Drisco Shoal Lighted Bell Buoy 2. Fl. R., 4 sec.	In 20 feet at southerly point of shoal.		11	7
1729	Minneapolis Shoal. Oco. W., 6 sec. Radiobeacon. Distance-Finding Station.	In 20 feet. 45 34.9      86 59.0		82	17
1730	Corona Shoal Lighted Bell Buoy 4. Fl. R., 10 sec.	In 30 feet on southwest side of shoal.		11	7
1731	Ford River Shoal Lighted Buoy 5. Fl. W., 4 sec.	In 25 feet, marks southeast- erly point of shoal.		5	9

## MICHIGAN

No.	Candlepower Apparatus lumens	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1721	100 e	Range maintained by Inland Lime & Stone Co.	Feet Orange and white square daymark on post.	Year square 1935
1722	100 e	-----	Orange and white square daymark on post.	square 1935
1723	110 200 mm a	Flash 0.4 sec.----- WHISTLE, on buoy.	Black. Spar station buoy.	
1724	1,000 4 a	Flash 1 sec., eclipse 9 sec.---	Black skeleton tower on con- crete base.	1928 73
1725	35,000 3 c 650 3 a	Light 10 sec., eclipse 5 sec. Winter light, Fl. W., 15 sec., flash 1.5 sec., after Dec. 5. DIAPHONE, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 208 kc, groups of 2 dashes, 2 dots (--- • •). Antenna lead-in at light tower.	Gray square tower on con- crete arb.	1928 59
			Telephone via Beaver Island Coast Guard Station and radiotelephone at this sta- tion.	
			DISTANCE-FINDING STA- TION. For method of oper- ation, see p. 11.	
1726	110 200 mm a	Flash, 0.4 sec.----- BELL, on buoy.	Black. Spar station buoy.	
1727	110 200 mm a	Flash 0.4 sec.-----	White skeleton tower on concrete base.	1931
1728	30 200 mm a	Flash 0.4 sec.----- BELL, on buoy.	Red. Spar station buoy.	
1729	20,000 4 c 600 4 e	Light 4 sec., eclipse 2 sec.--- Winter light, Fl. W., 10 sec., flash 1 sec. DIAPHONE, two tone air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 305 kc, groups of dash, dot, 2 dashes. (--- • --- • ---). Antenna lead-in at light tower.	Square cream-colored tower on concrete base.	1935
			Radiotelephone at this sta- tion.	
			DISTANCE-FINDING STA- TION. For method of oper- ation, see p. 11.	
1730	30 200 mm a	Flash 1 sec.----- BELL, on buoy.	Red. Spar station buoy.	
1731	110 200 mm a	Flash 0.4 sec.-----	Black. Spar station buoy.	

## GREEN BAY

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>NORTH END</b>					
1732	ESCANABA..... Fl. W., 6 sec.	Near end of Sand Point, west side of Little Bay de Noc. 45 44.8	87 02.2	Feet 45	14
1733	ESCANABA YACHT HARBOR NORTH PIERHEAD. U.	East end of north pierhead....		30	11
1734	Little Bay de Noc Shoal Lighted Buoy 10. Fl. R., 4 sec.	In 20 feet, southwest point of shoal.		11	7
1736	SQUAW POINT..... Fl. W., E. sector, 10 sec. U.	On west end of point..... 45 40.0	87 00.3	40 10	13 10
1736	GLADSTONE BREAKWATER..... Occ. W., 2 sec. U.	On breakwater.....		13	10
1737	Saunders Point Lighted Buoy 11. Fl. W., 4 sec.	In 16 feet.....		11	9
1738	CEDAR RIVER PIERHEAD..... Fl. W., 4 sec. U.	On outer end of west pier.... 45 24.5	87 21.1	38	10
1739	JACKSON HARBOR..... Fl. R., 4 sec. U.	On point, northerly side of en- trance to harbor.		25	7
1740	BOYER BLUFF..... Fl. W., 10 sec. U.	Northwest end of Washing- ton Island.		215	12
1741	Whaleback Shoal East End Lighted Bell Buoy 4. Fl. W., 6 sec.	In 84 feet, on southeast point of shoal.		12	10
<b>SOUTH END</b>					
1742	Horseshoe Reef Lighted Buoy 2. Fl. W., 4 sec.	In 24 feet, marks southeast point of reef.		8	9
1742	HORSESHOE ISLAND..... Fl. G., 4 sec. U.	On southwest point of island. 45 10.6	87 12.7	28	28
1743	EAGLE BLUFF..... Fl. W., 10 sec. U.	On west point of bluff..... 45 10.1	87 14.2	76	13
1744	Strawberry Channel Southeast Lighted Bell Buoy 6. Fl. R., 4 sec.	In 16 feet, on west side of channel, 1.6 miles southerly from Eagle Bluff Light- house.		11	7
1745	Chambers Island North Shoal Lighted Bell Buoy 1. Fl. W., 4 sec.	In 35 feet, marks shoal at northeasterly end of island.		12	10

## MICHIGAN AND WISCONSIN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1732	2,700 375 mm e	Flash 2 sec..... HORN, diaphragm air; blast 2 sec., silent 18 sec.	Feet White square tower on steel pier. Telephone at this station. Storm warning signals shown west of City Dock. Also on south side of Sand Point, daytime only from Memori- al Day to Labor Day.	Year 1038 1941
1733	200 e	Maintained by city of Escanaba, Mich.	Wood pole.	1941
1734	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1735	W. 350 R. 100 6 a	Flash 1 sec. Red from 353° to 28°, covers shoals south- ward of point.	Buff octagonal tower.	1897 38
1736	40 e	Light 1 sec., eclipse 1 sec. Maintained by city of Gladstone.	Wood pole.	1037 1941
1737	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1738	170 300 mm a	Flash 0.4 sec.....	White skeleton tower.	1889 1922
1739	30 200 mm a	Flash 0.4 sec.....	Red skeleton tower on con- crete base.	1931
1740	300 375 mm a	Flash 1 sec.....	White skeleton tower.	1933
1741	350 300 mm e	Flash 1 sec..... BELL, on buoy.	Red. Spar station buoy.	
1742	110 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1742	60 200 mm e	Flash 0.4 sec.....	Pole attached to battery house on concrete base.	1947
1743	350 5 a	Flash 1 sec.....	Yellow, red roof, square tower attached to dwelling.	1868 48 1909
1744	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1745	200 200 mm e	Flash 0.4 sec..... BELL, on buoy.	Black. Spar station buoy.	

## GREEN BAY

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH END</b>					
1746	CHAMBERS ISLAND----- F. Fl. W., 30 sec. Marker Radiobeacon.	On west point of small bay, north side of island. 45 12.1                      87 21.0		Feet 68	16
1747	Chambers Island West Shoal Lighted Bell Buoy 5. Fl. W., 4 sec.	In 24 feet, at west end of shoal.		11	0
1748	MENOMINEE INNER BREAK- WATER Fl. E., 5 sec. U.	Southerly end of breakwater.		21	11
1749	MENOMINEE PIERHEAD RANGE FRONT. F. E. Marker Radiobeacon.	On end of north pier----- 45 06.7                      87 35.1		46	14
1750	MENOMINEE PIERHEAD RANGE REAR. F. E.	745 feet 245° from front light.		59	15
1751	Green Island Shoal Lighted Buoy 1. Fl. W., 4 sec.	In 71 feet, on northwest cor- ner of dumping ground area.		10	9
1752	GREEN ISLAND----- Fl. W., 10 sec. U.	On island, near southeast point.		57	15
1753	Peashtigo Reef----- F. W. U.	In 8 feet, on southeast point of shoal. 44 57.4                      87 34.9		72	10
1754	Sherwood Point Shoal Lighted Bell Buoy 7. Fl. W., 4 sec.	In 19 feet on northerly side of shoal.		11	9
1755	SHERWOOD POINT----- Oco. W., 10 sec. Marker Radiobeacon.	On south side of west entrance to Sturgeon Bay. 44 53.8                      87 26.0		61	15

## WISCONSIN AND MICHIGAN

No.	Candlepower Apparatus Fluorimant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1746	F. 1,700 Fl. 14,000 4 low 120 200 mm a	Fixed light with 2 sec. flash every 30 sec. Visible from 75° to 242°. Winter light, Fl. W., 3 sec., flash 0.3 sec. RADIOBEACON: Transmits on 304 kc, a 5 sec. dash every 15 sec. Antenna lead-in 60 feet 123° from light tower.	Feet 42	Year 1868
1747	110 200 mm a	Flash 0.4 sec----- BELL, on buoy.	Black.	Spar station buoy.
1748	500 e	Flash 1 sec. Maintained by City of Menominee, Mich.	Post.	1934
1749	4,500 4 a	DIAPHONE, air; blast 3 sec., silent 27 sec. RADIOBEACON: Transmits on 286 kc, a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	Red octagonal tower on square concrete base. 1877 34 Telephone at this station. Storm warning signals shown daytime only on roof of Carpenter-Cook Bldg., southeast part of city.	1927 1916
1750	8,000 Rf e	-----	Red skeleton tower.	1916
1751	140 200 mm e	Flash 0.4 sec-----	Black.	Spar station buoy.
1752	1,000 4 a	Flash 1 sec., eclipse 9 sec---	Yellow square tower attached to dwelling. 1863 48	1899
1753	20,000 4 e 130 200 mm a	HORN, diaphragm, air; blast 3 sec., silent 27 sec. Standby light, Fl. W. 5 sec., flash 0.5 sec., will show in event of failure of main light. Winter light shows same characteristic as standby.	Cream-color conical tower on cylindrical base. 1934	1934
1754	110 200 mm a	Flash 0.4 sec----- BELL, on buoy.	Black.	Spar station buoy.
1755	12,000 4 e	Light 5 sec., eclipse 5 sec.--- HORN, diaphragm, air; group of 2 blasts every 30 sec., blast 1.5 sec., silent 3 sec., blast 1.5 sec., silent 24 sec. Bell; 1 stroke every 10 sec., if horn is disabled. RADIOBEACON: Transmits on 298 kc, a group of 0.5 sec. dashes for 15.5 sec., silent 14.5 sec. Antenna lead-in at light tower.	White square tower attached to dwelling. 1883 35. Telephone and radiotele- phone at this station.	1883

## GREEN BAY

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>SOUTH END</b>					
1756	Oconto Harbor Lighted Bell Buoy 1. Fl. W., 4 sec.			Feet 11	9
1757	OCONTO HARBOR SOUTH PIER-HEAD. U. Fl. W., 10 sec.	On east end of pier..... 44 53.5	87 49.2	37	10
1758	PENNAUKEE HARBOR..... U. Fl. W., 4 sec.	On east pier..... 44 49.9	87 53.9	27	10
1759	Big Suamico Lighted Buoy 1 Fl. W., 4 sec.	In 9 feet on south side of entrance to channel.		5	-----
1760	Big Suamico Lighted Buoy 2. Fl. E., 4 sec.	In 9 feet on north side of channel at band.		5	-----
1761	Green Bay Harbor Entrance... Occ. E., 8 sec. Radiobeacon. Distance-Finding Station.	On west side of entrance to channel. 44 39.2	87 54.1	72	16
1762	Green Bay Lighted Bell Buoy 9. Fl. W., 4 sec.	In 21 feet.....		11	9
1763	GREEN BAY ANGLE..... U. Fl. R., 2.5 sec.	7,920 feet 053½° from Tall Point Light 24.		50	10
1764	Green Bay Elbow Lighted Buoy 19. Fl. W., 4 sec.	In 21 feet, at turn in channel..		10	9
1765	Green Bay Elbow Lighted Bell Buoy 20. Fl. R., 4 sec.	In 24 feet, at turn in channel..		11	7
1766	TAIL POINT 24..... U. Fl. R., 2.5 sec.	In 10 feet, west side of channel. 44 35.0	87 58.6	38	13
1767	Green Bay Elbow Lighted Buoy 25. Fl. W., 4 sec.	In 23 feet, on east side of turn in channel.		13	10
1768	Green Bay Lighted Buoy 28... Fl. R., 4 sec.	In 24 feet, at elbow of dredged channel.		13	7
1769	GRASSY ISLAND LOWER 37... U. Fl. G., 5 sec.	On north end of channel pier... 44 33.6	87 50.8	27	10
1770	GRASSY ISLAND UPPER 30... U. F. G.	On south end of channel pier... U.		34	10
1771	Green Bay Lighted Buoy 44... Fl. R., 4 sec.	In 22 feet.....		11	7
1772	Green Bay Lighted Bell Buoy 45. Fl. W., 4 sec.	In 24 feet.....		11	9

## WISCONSIN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt:
1756	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Feet Black. Spar station buoy.	Year 1915
1757	170 300 mm a	Flash 1 sec.....	White skeleton tower on concrete base.	1915
1758	110 200 mm a	Flash 0.4 sec..... BELL, hand, answers signals.	White skeleton tower on concrete base.	1031
1759	40 150 mm a	Flash 0.4 sec.....	Black.	
1760	10 150 mm a	Flash 0.4 sec.....	Red.	
1761	5,000 4 e 800 4 e	Light 4 sec., eclipse 2 sec... Winter light Fl. R., 10 sec., flash 1 sec. HORN, diaphragm, air; blast 2 sec., silent 18 sec. RADIOBEACON: Transmits on 314 kc, groups of dash, dot, dash (--- e ---). An- tenna lead-in at light tower.	Cream-color conical tower on cylindrical base.	1935
1762	170 200 mm a	Flash 0.4 sec..... BELL, on buoy.	DISTANCE-FINDING STA- TION. For method of op- eration, see p. 11. Telephone at this station. Black. Spar station buoy.	
1763	100 375 mm a	Flash 0.5 sec.....	Red skeleton tower.	1937
1764	140 200 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
1765	30 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Red. Spar station buoy.	
1766	1,000 4 a	Flash 0.5 sec.....	Buff, red roof, cylindrical lan- tern on dwelling, on crib. 36 1848 1899	
1767	110 200 mm a	Flash 0.4 sec.....	Black. Spar station buoy.	
1768	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1769	130 6 a	Flash 1 sec.....	White square pyramidal tower. 26 1907	
1770	130 6 a	Flash 1 sec.....	White square pyramidal tower. 33 1872 1907	
1771	30 200 mm a	Flash 0.4 sec.....	Red. Spar station buoy.	
1772	110 200 mm a	Flash 0.4 sec..... BELL, on buoy.	Black. Spar station buoy.	
			Storm warning signals shown on Minahan Bldg., 110-116 Walnut St., Green Bay City.	

## FOX RIVER AND LAKE WINNEBAGO

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>FOX RIVER</b>					
<b>GREEN BAY CITY TO DE PERE</b>					
1774	<i>Green Bay City Lighted Buoy</i> 8. Fl. R., 4 sec.	In 21 feet.....		5	4
1775	<i>Green Bay City Lighted Buoy</i> 13. Fl. W., 4 sec.	In 21 feet.....		5	7
1776	<i>Green Bay City Lighted Buoy</i> 20. Fl. R., 4 sec.	In 18 feet.....		5	4
1777	<i>De Pere Lighted Buoy</i> 29..... Fl. R., 4 sec.	In 19 feet, on west side of en- trance to turning basin.		9	4
<b>DE PERE TO MENASHA</b>					
1778	<i>KAUKAUNA LOWER CRIB</i> 24..... Fl. R., 4 sec. U.	On north side of channel ap- proaching entrance to Lock 5.	44 17.4      88 14.2	14	
1779	<i>Grignon Rapids Lighted Buoy</i> 33. Fl. G., 4 sec.	In 8 feet, marks dredged channel above Appleton.		5	
1780	<i>Menasha Lower Lighted Buoy</i> 72. Fl. R., 4 sec.	In 9 feet, on west side of en- trance to channel to Men- asha Lock, Little Lake Butte des Morts.		5	
1781	<i>MENASHA UPPER</i> 96..... Fl. R., 4 sec. U.	In 7 feet, in northwest end of Lake Winnebago.		18	6
<b>LAKE WINNEBAGO</b>					
1782	<i>Lighthouse Reef Lighted Buoy</i> 57. Fl. G., 4 sec.	In 9 feet, on southwesterly point of reef.		5	
1782.5	<i>KIMBERLEY</i> ..... Fl. W., 4.5 sec. U.	On northeast tip of Neenah Point.		40	13
1782.7	<i>Neenah-Nodaway Race Course Float Post Light A.</i> Fl. W.	In 12 feet, 2,500 feet 138° from Kimberley Light.		10	
1782.8	<i>Neenah-Nodaway Race Course Float Post Light B.</i> Fl. W.	In 16 feet, 9,700 feet 144° from Kimberley Light.		10	
1782.9	<i>Neenah-Nodaway Race Course Float Post Light C.</i> Fl. W.	In 17 feet, 9,000 feet 102° from Kimberley Light.		10	
1783	<i>Stevens Reef Lighted Buoy</i> 2..... Fl. W., 4 sec.	In 6 feet, on northerly end of reef.		5	8
1784	<i>ROCKWELL</i> ..... F. R.	On northerly side of entrance to Fox River.		26	9
1785	<i>FOND DU LAC RANGE FRONT.</i> ..... Fl. R., 4 sec. U.	West side of entrance to Fond du Lac Yacht Harbor.		60	0
1786	<i>FOND DU LAC RANGE REAR.</i> ..... F. R. U.	South of harbor, 180° from front light.		65	14

## WISCONSIN

No.	Candlepower Apparatus Diameter	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1774	12 150 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	Year
1775	40 160 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
1776	12 150 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	
1777	12 150 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	
1778	6 150 mm e	Flash 0.4 sec.....	Post on crib.	1948
1779	5 150 mm e	Flash 0.4 sec.....	Black.	
1780	5 150 mm e	Flash 0.4 sec.....	Red.	
1781	25 150 mm e	Flash 0.4 sec.....	Red skeleton tower.	1942
1782	15 150 mm e	Flash 0.4 sec.....	Black.	
1782.5	800 200 mm e	Flash 2 sec. Maintained by City of Neenah, Wis.		1946
1782.7	e	Maintained from May 15 to Oct. 1 by Neenah-Nod- away Yacht Club, Inc., Neenah, Wis.	Lantern and orange and white banded discs on post mounted on raft of metal drums.	
1782.8	e			
1782.9	e			
1783	70 150 mm e	Flash 0.4 sec.....	Red.	
1784	80 150 mm e	Maintained by J.D. Buckstaff, Oshkosh, Wis.	Octagonal concrete tower.	1923
1785	150 L1 e	Flash 1 sec. Range main- tained by City of Fond du Lac.	White wood tower.	1943 55
1786	500 L1 e		Pole.	1943 60

## LAKE WINNEBAGO, UPPER FOX AND WOLF RIVERS

No.	Name Character and period of light	Location		Light above low water	Miles seen
		Latitude, N.	Longitude, W.		
<b>LAKE WINNEBAGO</b>					
1787	<i>Oshkosh Reef Lighted Buoy 2.</i> Fl. W., 2.5 sec.	In 6 feet.....		Feet 5	7
1788	<i>Long Point Reef Lighted Buoy 8.</i> Fl. W., 4 sec.	In 17 feet north of north- easterly point of reef.		5	7
1789	<i>COLUMBIA PARK</i> ..... Fl. W., 5 sec.	On east shore of Lake Winne- bago.		91	18
1789.5	<i>COLUMBIA RANGE FRONT</i> ..... F. R.	43 54.9                      88 19.0 478 feet 53° from Columbia Park Light.		11	---
1789.7	<i>COLUMBIA RANGE REAR</i> ..... F. R.	179 feet 76° from front light.		20	---
<b>UPPER FOX AND WOLF RIVERS</b>					
1700	<i>Big Lake Butte des Morts Lighted Buoy 2.</i> Fl. R., 4 sec.	In 10 feet.....		5	4
1701	<i>Sunset Point Lighted Buoy 1</i> .. Fl. W., 4 sec.	In 10 feet.....		5	7
1702	<i>Butte des Morts Bar Lighted Buoy 4.</i> Fl. W., 4 sec.	Near edge of channel.....		5	7
1703	<i>Butte des Morts Bar Lighted Buoy 5.</i> Fl. W., 4 sec.	Marks dredged channel.....		5	7
1703.5	<i>Big Lake Butte des Morts Lighted Buoy 6.</i> Fl. R., 4 sec.	In 7 feet.....		5	---
1704	<i>Daggells Creek Lighted Buoy 8.</i> Fl. R., 4 sec.	In 7 feet.....		5	---
1704.5	<i>Big Lake Butte des Morts Lighted Buoy 10.</i> Fl. R., 4 sec.	In 8 feet.....		5	---
1705	<i>Wolf River Entrance Lighted Buoy 1.</i> Fl. W., 4 sec.	In 10 feet, on southeast side of junction of Fox and Wolf Rivers.		5	7
1705.5	<i>Wolf River Lighted Buoy 11</i> .... Fl. W., 4 sec.	In 9 feet, at bend in river south of Winneconne.		5	---
1706	<i>Goose Island Channel Lighted Buoy 2.</i> Fl. R., 4 sec.	In 8 feet, at turn in course, southeasterly from Goose Island, Lake Winneconne.		5	5
1707	<i>Goose Island Channel Lighted Buoy 13.</i> Fl. W., 4 sec.	In 8 feet, at turn in Goose Island Channel.		5	7
1708	<i>Boom Bay Lighted Buoy 1</i> ..... Fl. G., 4 sec.	In 8 feet, marks entrance to Boom Cut.		5	5

## WISCONSIN

No.	Candlepower Apparatus Illuminant	Light characteristic Fog signal	Structure, vessel or buoy	
			Top of lantern above ground	Established Rebuilt
1787	40	Flash 0.5 sec.....	Feet Red.	Year
1788	150 mm e 40	Flash 0.4 sec.....	Red.	
1789	150 mm e 2,000 300 mm e	Flash 1 sec.....	White skeleton tower.	1937
1789.5	130 mm e	} Maintained by County of Fond du Lac, Wis.	White pole.	1947
1789.7	130 mm e		White pole	1947
1790	10 150 mm e	Flash 0.4 sec.....	Red.	
1791	40	Flash 0.4 sec.....	Black.	
1792	150 mm e 40 150 mm e	Flash 0.4 sec.....	Red.	
1793	40 150 mm e	Flash 0.4 sec.....	Black.	
1793.5	9 150 mm e	Flash 0.4 sec.....	Red.	
1794	10 150 mm e	Flash 0.4 sec.....	Red.	
1794.5	9 150 mm e	Flash 0.4 sec.....	Red. Spar station buoy.	
1795	40 150 mm e	Flash 0.4 sec.....	Black.	
1795.5	40 150 mm e	Flash 0.4 sec.....	Black. Spar station buoy.	
1796	10 150 mm e	Flash 0.4 sec.....	Red.	
1797	40 150 mm e	Flash 0.4 sec.....	Black.	
1798	10 160 mm e	Flash 0.4 sec.....	Black.	

# UNLIGHTED BUOYS AND DAYBEACONS

## ST. LAWRENCE RIVER

Name; mark on aid	Description	Location—Depth
<b>WADDINGTON HARBOR APPROACH</b>		
<i>Channel Buoy 2</i> .....	Red; 3d-cl. spar.....	Off Dry Island. In 16 feet.
<i>Channel Buoy 4</i> .....	Red reflector. Red; 3d-cl. spar.....	East of Clark Island. In 16 feet.
<i>Channel Buoy 6</i> .....	Red reflector. Red; 3d-cl. spar.....	South of Clark Island. In 16 feet.
<b>OGDENSBURG HARBOR</b>		
<i>Ogdensburg Middle Entrance Buoy 1</i> .....	Red; 3d-cl. nun (s).....	In 18 feet.
<i>Ogdensburg Shoal Buoy 1</i> .....	Red reflector. Black; 3d-cl. can (s).....	East side of west entrance. In 17 feet.
<i>East Buoy 3</i> .....	White reflector. Black; 3d-cl. can (s).....	At turn in channel. In 17 feet.
<i>Lighthouse Buoy 4</i> .....	White reflector. Red; 3d-cl. nun (s).....	Abreast Lighthouse. In 18 feet.
<i>Algonquin Paper Co. Buoy 1</i> .....	Red reflector. Black; 3d-cl. spar.....	Marks south limit of 14-foot shoal. In 18 feet.
<i>Algonquin Paper Co. Buoy 3</i> .....	White reflector. Black; 3d-cl. spar.....	Marks south limit of 14-foot shoal. In 14 feet.
<b>MAIN CHANNEL</b>		
<i>Catamaran Shoal Buoy 1</i> .....	White reflector. Black; 3d-cl. can (s).....	In 15 feet.
<i>Whaleback Shoal Buoy 7</i> .....	White reflector. Black; 3d-cl. can (s).....	In 20 feet.
<i>Bay State Lower Shoal Buoy 9</i> .....	White reflector. Red; 3d-cl. nun (s).....	In 24 feet.
<i>Blind Bay Shoals Upper Buoy 8</i> .....	Red reflector. Red; 3d-cl. nun (s).....	Abreast Chippewa Point. In 16 feet.
<i>Dark Island Shoal Buoy 8</i> .....	Red reflector. Red; 3d-cl. nun (s).....	Southwest of Dark Island. In 20 feet.
<i>Scow Island Shoal Buoy 13</i> .....	Red reflector. Black; 3d-cl. can (s).....	Marks outer shoal. In 18 feet.
<i>Willoughby Island Shoal Buoy 10</i> .....	White reflector. Red; 3d-cl. nun (s).....	South of Willoughby Island. In 19 feet.
<i>Frontenac Shoal Buoy 14</i> .....	Red reflector. Red; 4th-cl. spar.....	On southeast edge of shoal, opposite Alexandria Bay. In 16 feet.
<i>Broadway Shoal Buoy</i> .....	Red reflector. Red and black horizontal bands; 3d-cl. can (s).....	On north end of shoal, abreast Alexandria Bay. In 16 feet.
<i>Niagara Shoal Buoy 63</i> .....	Black; 4th-cl. spar.....	In 19 feet.
<i>Granite State Upper Shoal Buoy 12</i> .....	White reflector. Red; 3d-cl. nun (s).....	At upper end of Granite State Shoal. In 20 feet.
<i>Prospect Park Shoal Buoy 67</i> .....	Red reflector. Black; 3d-cl. can (s).....	Off Bartlett Point. In 19 feet.
<i>Carlton Island Buoy 67A</i> .....	White reflector. Black; 3d-cl. spar.....	1,800 feet 20 1/4° from Carlton Island Light. In 25 feet.
<b>CARLETON ISLAND SOUTH CHANNEL</b>		
<i>Lower Buoy 1</i> .....	White reflector. Black; 4th-cl. spar.....	On north point of Feather Bed Shoal. In 16 feet.
<i>Upper Buoy 3</i> .....	Black; 4th-cl. spar.....	Marks Feather Bed Shoal. In 16 feet.

## LAKE ONTARIO

<b>EAST END</b>		
<i>Charley Shoal Buoy 1</i> .....	Black; 3d-cl. spar.....	On west side of shoal. In 24 feet.
<i>Calf Island Spit Buoy 5</i> .....	White reflector. Black; 2-cl. can (s).....	Southwest of Stony Island. In 21 feet.
<i>Johnson Shoal Buoy 1</i> .....	White reflector. Black; 3d-cl. can (s).....	About 1 1/4 miles 237° from Chaumont Harbor Light. In 13 feet.



## LAKE ONTARIO

Name; mark on aid	Description	Location—Depth
<b>OSWEGO HARBOR</b>		
<i>Oswego Inner Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	2,725 feet 173½° from Oswego East Break-water Light. In 19 feet.
<i>Oswego Elevator Channel Buoy 3</i> .....	Black; 3d-cl. spar.....	Maintained by State of New York. In 21 feet.
<i>Oswego Elevator Channel Buoy 5</i> .....	Black; 3d-cl. spar.....	On south side of channel. In 21 feet.
<i>Oswego West Harbor Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	On south side of channel. In 21 feet.
<i>Oswego West Harbor Buoy 5</i> .....	Black; 3d-cl. can (s)..... White reflector.	On north side of channel. In 21 feet.
<i>Oswego West Harbor Buoy 7</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks channel limits of the southeasterly cut-off line to the turning basin. In 21 feet.
<i>Oswego West Harbor Buoy 10</i> .....	White reflector.	Marks northwest corner of turning basin. In 15 feet.
<i>Oswego West Harbor Buoy 10</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	
<b>BODUS BAY</b>		
<i>Sodus Bay Entrance Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	At entrance to cut. In 23 feet.
<i>Sodus Bay Entrance Buoy 3</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 22 feet.
<i>Sodus Bay Entrance Buoy 5</i> .....	Black; 3d-cl. spar..... White reflector.	On easterly side of channel. In 21 feet.
<i>Sodus Bay Entrance Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	On westerly side of channel. In 21 feet.
<i>Sodus Bay Channel Buoy 5</i> .....	Black; 3d-cl. can (s)..... White reflector.	At inner end of cut. In 21 feet.
<i>Sodus Bay Channel Buoy 6</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Pennsylvania Dock Channel Buoy 2</i> .....	Red; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 1</i> .....	Black; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 4</i> .....	Red; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 5</i> .....	Black; 3d-cl. spar.....	Maintained by Pennsylvania Railroad Co. In 18 feet.
<i>Pennsylvania Dock Channel Buoy 6</i> .....	Red; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 8</i> .....	Black; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 5</i> .....	Black; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 7</i> .....	Black; 3d-cl. spar.....	
<i>Pennsylvania Dock Channel Buoy 9</i> .....	Black; 3d-cl. spar.....	
<b>OAK ORCHARD</b>		
<i>Oak Orchard Harbor Buoy 1</i> .....	Black; 3d-cl. spar..... White reflector.	Marks outer end of submerged east pier. In 14 feet.
<i>Oak Orchard Harbor Buoy 2</i> .....	Red; 3d-cl. spar..... Red reflector.	Marks outer end of submerged west pier. In 14 feet.
<b>OLCOTT</b>		
<i>Olcott Racing Buoy A</i> .....	White can, black top.....	In 15 feet. Maintained by Olcott Yacht Club.
<i>Olcott Racing Buoy C</i> .....	White can, black top.....	In 48 feet. Olcott, N. Y.

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>BUFFALO HARBOR</b>		
<i>North Entrance Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 20 feet.
<i>Buffalo River Junction Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.....	In 23 feet.
<i>North Entrance Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	In 23 feet.
<i>Buffalo River Buoy 5</i> .....	Black; 3d-cl. spar..... White reflector.	Marks shoal, south end of breakwater. In 23 feet.

## NIAGARA RIVER

Name; mark on aid	Description	Location—Depth
<b>BLACK ROCK CHANNEL</b>		
<i>Entrance Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 21 feet.
<i>Black Rock Channel Buoy 3</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 20 feet.

## NIAGARA RIVER

Name; mark on aid	Description	Location—Depth
<b>TONAWANDA CHANNEL</b>		
<i>Strawberry Island Cut Buoy 8</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 6</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 9</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 8</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 8 A</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 11</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 6</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 15</i> .....	Black; 3d-cl. can (s)..... Green reflector.	East of Motor Island. In 21 feet.
<i>Strawberry Island Cut Buoy 8</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Strawberry Island Cut Buoy 10</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Off Buffalo General Electric Co. plant. In 21 feet.
<i>Grand Island Shoal Buoy 15 A</i> .....	Black; 3d-cl. can (s)..... Green reflector.	Marks easterly side of shoal area. In 24 feet.
<i>Grand Island Shoal Buoy 15 B</i> .....	Black; 3d-cl. can (s)..... Green reflector.	Marks easterly side of shoal area. In 24 feet.
<i>Tonawanda Channel Shoal Buoy 11 A</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks lower end of shoal opposite the Samet-Solvay Company Dock. In 20 feet.
<i>Grand Island Buoy 17</i> .....	Black; 3d-cl. can (s)..... Green reflector.	Near Grand Island, opposite Wickwire-Spencer Steel Co. In 21 feet.
<i>Rattlesnake Shoal Buoy 16</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Tonawanda Island Buoy 1</i> .....	White reflector.	Off southwest end of island. In 12 feet.
<i>Tonawanda Channel Buoy 19</i> .....	Black; 3d-cl. can (s)..... Green reflector.	South of Tonawanda Intake Crib. In 21 feet.
<i>Tonawanda Channel Buoy 13</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Tonawanda Channel Buoy 11</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 21 feet.
<i>Tonawanda Channel Buoy 10</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Tonawanda Channel Buoy 13</i> .....	Black; 3d-cl. can (s)..... Green reflector.	Northeast of N. Tonawanda Intake Crib. In 21 feet.
<i>Tonawanda Channel Buoy 12</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Tonawanda Channel Buoy 13</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 21 feet.
<i>Tonawanda Channel Buoy 17</i> .....	Black; 3d-cl. can (s)..... Green reflector.	Off Lockport Intake Crib. In 24 feet.
<i>Tonawanda Channel Buoy 14</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks bend in channel. In 24 feet.
<i>Turning Basin Buoy 19</i> .....	Black; 3d-cl. spar..... White reflector.	In 12 feet.
<b>NIAGARA FALLS CHANNEL</b>		
<i>Niagara Falls Channel Buoy 1</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 10 feet.
<i>Niagara Falls Channel Buoy 2</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 19 feet.
<i>Niagara Falls Channel Buoy 3</i> .....	Black; 3d-cl. can (s)..... Green reflector.	At angle in channel. In 10 feet.
<i>Niagara Falls Channel Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	At angle in channel. In 14 feet.
<i>Niagara Falls Channel Buoy 5</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 6</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 7</i> .....	Black; 3d-cl. can (s)..... Green reflector.	At angle in channel. In 12 feet.
<i>Niagara Falls Channel Buoy 8</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	At angle in channel. In 12 feet.
<i>Niagara Falls Channel Buoy 9</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 10</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 11</i> .....	Black; 3d-cl. can (s)..... Green reflector.	In 12 feet.

## NIAGARA RIVER

Name; mark on aid	Description	Location—Depth
<b>NIAGARA FALLS CHANNEL</b>		
<i>Niagara Falls Channel Buoy 12</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 13</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 14</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 15</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 16</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 17</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 16 feet.
<i>Niagara Falls Channel Buoy 18</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 14 feet.
<i>Niagara Falls Channel Buoy 19</i> ...	Black; 3d-cl. can (s)..... Green reflector.	At angle in channel. In 16 feet.
<i>Niagara Falls Channel Buoy 20</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	At angle in channel. In 14 feet.
<i>Niagara Falls Channel Buoy 21</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 18 feet.
<i>Niagara Falls Channel Buoy 22</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 18 feet.
<i>Niagara Falls Channel Buoy 23</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 14 feet.
<i>Niagara Falls Channel Buoy 24</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 13 feet.
<i>Niagara Falls Channel Buoy 25</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 14 feet.
<i>Niagara Falls Channel Buoy 26</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 13 feet.
<i>Niagara Falls Channel Buoy 27</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 19 feet.
<i>Niagara Falls Channel Buoy 28</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 12 feet.
<i>Niagara Falls Channel Buoy 29</i> ...	Black; 3d-cl. can (s)..... Green reflector.	At angle in channel. In 24 feet.
<i>Niagara Falls Channel Buoy 30</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	At angle in channel. In 25 feet.
<i>Niagara Falls Channel Buoy 31</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 15 feet.
<i>Niagara Falls Channel Buoy 32</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 14 feet.
<i>Niagara Falls Channel Buoy 33</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 16 feet.
<i>Niagara Falls Channel Buoy 34</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 16 feet.
<i>Niagara Falls Channel Buoy 35</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 14 feet.
<i>Niagara Falls Channel Buoy 36</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 16 feet.
<i>Schlosser Channel Buoy 38</i> ...	Black; 3d-cl. can (s)..... Red reflector.	In 12 feet.
<i>Schlosser Channel Buoy 37</i> ...	Red; 3d-cl. nun (s)..... Green reflector.	In 14 feet.
<i>Schlosser Channel Buoy 39</i> ...	Black; 3d-cl. can (s)..... Green reflector.	In 18 feet.
<i>Schlosser Channel Buoy 40</i> ...	Red; 3d-cl. nun (s)..... Red reflector.	In 14 feet.
<b>NIAGARA RIVER ENTRANCE</b>		
<i>Middle Reef Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	In 10 feet.
<i>Southeast Shoal Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	In 10 feet.
<i>Bird Island Red Buoy 6</i> .....	Red; 3d-cl. spar..... Red reflector.	In 11 feet.
<b>WEST CHANNEL</b>		
<i>West Channel Buoy 8</i> .....	Red; 3d cl. nun (s)..... Red reflector.	In 15 feet.
<i>West Channel Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 15 feet.
<i>West Channel Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 13 feet.

## NIAGARA RIVER

Name; mark on aid	Description	Location—Depth
<b>BUCKHORN ISLAND CHANNEL</b>		
<i>Buckhorn Island Channel Buoy 8</i> .....	Black; 4th-cl. spar..... White reflector.	In 13 feet.
<i>Buckhorn Island Channel Buoy 12</i> .....	Red; 4th-cl. spar..... Red reflector.	
<i>Buckhorn Island Channel Buoy 11</i> .....	Black; 4th-cl. spar..... White reflector.	
<i>Buckhorn Island Channel Buoy 14</i> .....	Red; 4th-cl. spar..... Red reflector.	

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>BUFFALO</b>		
<b>SOUTH ENTRANCE</b>		
<i>South Entrance Buoy 1</i> .....	Black; 3d-cl. spar..... White reflector.	At entrance to Union Ship Canal. In 22 feet.
<i>Buffalo Outer Harbor Buoy 1</i> .....	Red; 3d-cl. spar..... Red reflector.	In 18 feet.
<i>Buffalo Outer Harbor Buoy 3</i> .....	Black; 3d-cl. spar..... White reflector.	In 18 feet.
<b>EAST END</b>		
<i>Waverly Shoal Buoy 1 A</i> .....	Black; 3d-cl. can (s)..... White reflector.	South of 12-foot spot of shoal. In 14 feet.
<b>DUNKIRK HARBOR</b>		
<i>Dunkirk Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	In 17 feet.
<i>Dunkirk Buoy 6</i> .....	Red; 3d-cl. spar..... Red reflector.	In 18 feet.
<i>Dunkirk Buoy 8</i> .....	Red; 3d-cl. spar..... Red reflector.	In 17 feet.
<i>Dunkirk Buoy 7</i> .....	Black; 3d-cl. spar..... White reflector.	In 17 feet.
<b>ERIE HARBOR</b>		
<i>Erie Harbor Outer Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	On south side of channel. In 25 feet.
<i>Erie Harbor Outer Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	On north side of channel. In 25 feet.
<i>Erie Harbor Buoy 6</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Erie Harbor Buoy 7</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Erie Harbor Buoy 8</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Erie Harbor Buoy 11</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 28 feet.
<i>Erie Harbor Buoy 13</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 18 feet.
<i>Water Pipe Buoy A</i> .....	Red and black horizontal bands; spar.	In 17 feet.
<i>Water Pipe Buoy B</i> .....	Red and black horizontal bands; spar.	In 22 feet.
<i>Water Pipe Buoy C</i> .....	Red and black horizontal bands; spar.	In 20 feet.
<b>CONNEAUT HARBOR</b>		
<i>New York Central Intake Crib Daybeacon</i> .....	White tripod with reflectors.	5.6 miles 76° from Conneaut East Breakwater Light. 13 feet high. Maintained by The New York Central System.
<i>Conneaut West Breakwater Daybeacon 1</i> .....	Green reflector on pipe standard.	On north side of 100-foot gap in west breakwater; 13 feet high.
<i>Conneaut West Breakwater Daybeacon 2</i> .....	White reflector on pipe standard.	On south side of 100-foot gap in west breakwater; 13 feet high.
<b>ASHTABULA HARBOR</b>		
<i>Ashtabula East Breakwater Daybeacon</i> .....	Red reflector on pipe standard.	East end of breakwater. 13 feet high.
<i>Dock Shoal Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	In 25 feet.

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>FAIRPORT HARBOR</b>		
<i>Industrial Ragon Corporation Buoy 1.</i>	Black can.	In 12 feet. Maintained by Industrial Ragon Corp.
<i>Fairport Daybeacon.</i>	Gray, conical tower, un-used lighthouse.	On bluff, east of river.
<b>SOUTH SIDE</b>		
<i>Menor Harbor Yacht Club Racing Buoy A.</i>	White and orange horizontal bands; spar.	In 8 feet.
<i>Menor Harbor Yacht Club Racing Buoy B.</i>	White and orange horizontal bands; spar.	In 40 feet.
<i>Menor Harbor Yacht Club Racing Buoy C.</i>	White and orange horizontal bands; spar.	In 12 feet.
<i>Menor Harbor Yacht Club Racing Buoy D.</i>	White and orange horizontal bands; spar.	In 10 feet.
<i>Menor Harbor Yacht Club Racing Buoy E.</i>	White and orange horizontal bands; spar.	In 28 feet.
<i>Menor Harbor Yacht Club Racing Buoy F.</i>	White and orange horizontal bands; spar.	In 10 feet.
<b>CLEVELAND HARBOR</b>		
<i>Eucild Intake Buoy.</i>	Red and black horizontal bands; spar.	Marks water intake. In 12 feet. Maintained by Chase Brass & Copper Co.
<i>Cleveland Harbor Channel Buoy 1.</i>	Black; 3d-cl. spar.	On south side of channel, East Basin. In 22 feet.
<i>Cleveland Harbor Channel Buoy 2.</i>	Black; 3d-cl. spar.	At angle in channel, East Basin. In 22 feet.
<i>Cleveland Harbor Channel Buoy 3.</i>	White reflector.	
<i>Cleveland Harbor Channel Buoy 4.</i>	Red; 3d-cl. spar.	At angle in channel, East Basin. In 24 feet.
<b>SOUTH SIDE</b>		
<i>Rocky River Race Course Buoy A.</i>	White and orange horizontal bands; spar.	In 20 feet.
<i>Rocky River Race Course Buoy B.</i>	White and orange horizontal bands; spar.	In 35 feet.
<i>Rocky River Race Course Buoy C.</i>	White and orange horizontal bands; spar.	In 42 feet.
<i>Rocky River Race Course Buoy D.</i>	White and orange horizontal bands; spar.	In 45 feet.
<i>Rocky River Race Course Buoy E.</i>	White and orange horizontal bands; spar.	In 45 feet.
<i>Westlake Yacht Club Race Course Buoy F.</i>	White and orange horizontal bands; can.	In 28 feet.
<i>Westlake Yacht Club Race Course Buoy G.</i>	White and orange horizontal bands; can.	In 43 feet.
<b>LORAIN HARBOR</b>		
<i>Kansas Avenue Buoy.</i>	Red and black horizontal bands; spar.	Marks submerged piling extending off shore. In 6 feet. Maintained by city of Lorain, Ohio.
<i>Black River Buoy 1.</i>	Red; 3d-cl. spar.	In 18 feet.
<i>Black River Buoy 2.</i>	Red; 3d-cl. spar.	In 18 feet.
<i>Black River Buoy 3.</i>	Red; 3d-cl. spar.	In 18 feet.
<b>SOUTH SIDE</b>		
<i>Vermilion Outer Intake Buoy.</i>	Red and black horizontal bands; 3d-cl. spar.	Marks submerged water intake crib. In 12 feet. Maintained by Village of Vermilion, Ohio.
<i>Vermilion Crib Buoy.</i>	Red and black horizontal bands; spar.	Marks submerged waterworks crib, near entrance to harbor. In 12 feet. Maintained by village of Vermilion.
<b>SANDUSKY HARBOR</b>		
<i>Sandusky Bay Buoy 1.</i>	Black; 3d-cl. can (s).	In 20 feet.
<i>Sandusky Bay Buoy 2.</i>	White reflector.	
<i>Sandusky Bay Buoy 3.</i>	Red; 3d-cl. nun (s).	In 20 feet.
<i>Sandusky Bay Buoy 4.</i>	Red reflector.	
<i>Sandusky Bay Buoy 5.</i>	Black; 3d-cl. can (s).	In 20 feet.
<i>Sandusky Bay Buoy 6.</i>	White reflector.	
<i>Sandusky Bay Buoy 7.</i>	Red; 3d-cl. nun (s).	In 25 feet.
<i>Sandusky Bay Buoy 8.</i>	Red reflector.	
<i>Sandusky Bay Buoy 9.</i>	Red; 3d-cl. nun (s).	In 25 feet.
<i>Sandusky Bay Buoy 10.</i>	Red reflector.	
<i>Sandusky Bay Buoy 10A.</i>	Red; 3d-cl. spar.	In 19 feet.
	Red reflector.	

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>SANDUSKY HARBOR</b>		
<i>Sandusky Bay Buoy 11.</i>	Red; 3d-cl. nun (s).	Marks outer limit of shoal on north side of channel. In 20 feet.
<i>Sandusky Bay Buoy 12.</i>	Red reflector.	
<i>Sandusky Bay Buoy 13.</i>	Black 3d-cl. can (s).	In 18 feet.
<i>Sandusky Bay Buoy 14.</i>	White reflector.	
<i>Sandusky Bay Buoy 15.</i>	Red; 3d-cl. nun (s).	In 18 feet.
<i>Sandusky Bay Buoy 16.</i>	Red reflector.	
<i>Sandusky Bay Buoy 17.</i>	Black; 3d-cl. can (s).	In 13 feet.
<i>Sandusky Exit Channel Buoy 1.</i>	White reflector.	
<i>Sandusky Exit Channel Buoy 2.</i>	Red and black horizontal bands; 3d-cl. nun (s).	In 21 feet.
<i>Sandusky Bay Buoy 18.</i>	Red; 3d-cl. nun (s).	In 18 feet.
<i>Sandusky Bay Buoy 19.</i>	Red reflector.	
<i>Sandusky Bay Buoy 20.</i>	Black; 3d-cl. can (s).	In 18 feet.
<i>Sandusky Bay Buoy 21.</i>	White reflector.	
<i>Sandusky Bay Buoy 22.</i>	Black; 3d-cl. can (s).	In 18 feet.
<i>Sandusky Bay Buoy 23.</i>	Black; 3d-cl. can (s).	In 18 feet.
<i>Sandusky Bay Buoy 24.</i>	White reflector.	
<i>Dock Channel Buoy 25.</i>	Red; 3d-cl. nun (s).	In 18 feet.
<i>Dock Channel Buoy 26.</i>	Red reflector.	
<i>Dock Channel Buoy 27.</i>	Black; 3d-cl. can (s).	In 18 feet.
<i>Dock Channel Buoy 28.</i>	White reflector.	
<i>Dock Channel Buoy 29.</i>	Red; 3d-cl. nun (s).	In 18 feet.
<i>Dock Channel Buoy 30.</i>	Red reflector.	
<i>Dock Channel Buoy 31.</i>	Red; 3d-cl. nun (s).	In 18 feet.
<i>Dock Channel Buoy 32.</i>	Red reflector.	
<i>Dock Channel Buoy 33.</i>	Black; 3d-cl. can (s).	In 18 feet.
<i>Dock Channel Buoy 34.</i>	White reflector.	
<i>Dock Channel Buoy 35.</i>	Red; 3d-cl. nun (s).	In 18 feet.
<i>Dock Channel Buoy 36.</i>	Red reflector.	
<i>Dock Channel Buoy 37.</i>	Black; 3d-cl. spar.	In 18 feet.
<i>Dock Channel Buoy 38.</i>	White reflector.	
<b>SANDUSKY EXIT CHANNEL</b>		
<i>Sandusky Exit Channel Buoy 1.</i>	Black; 3d-cl. can (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 2.</i>	White reflector.	
<i>Sandusky Exit Channel Buoy 3.</i>	Black; 3d-cl. can (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 4.</i>	White reflector.	
<i>Sandusky Exit Channel Buoy 5.</i>	Red; 3d-cl. nun (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 6.</i>	Red reflector.	
<i>Sandusky Exit Channel Buoy 7.</i>	Red; 3d-cl. nun (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 8.</i>	Black; 3d-cl. can (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 9.</i>	White reflector.	
<i>Sandusky Exit Channel Buoy 10.</i>	Red; 3d-cl. nun (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 11.</i>	Red reflector.	
<i>Sandusky Exit Channel Buoy 12.</i>	Red; 3d-cl. nun (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 13.</i>	Red reflector.	
<i>Sandusky Exit Channel Buoy 14.</i>	Black; 3d-cl. can (s).	In 21 feet.
<i>Sandusky Exit Channel Buoy 15.</i>	White reflector.	
<b>SANDUSKY BAY AND RIVER</b>		
<i>States Point Buoy 1.</i>	Black can (M).	4,426 feet 234" from Sandusky Bay West End Light. In 6 feet.
<i>States Point Buoy 2.</i>	White reflector.	
<i>States Point Buoy 3.</i>	Red nun (M).	In 6 feet.
<i>States Point Buoy 4.</i>	Red reflector.	
<i>States Point Buoy 5.</i>	Black can (M).	In 6 feet.
<i>States Point Buoy 6.</i>	White reflector.	
<i>States Point Buoy 7.</i>	Red nun (M).	At turn in channel. In 6 feet.
<i>States Point Buoy 8.</i>	Red reflector.	
<i>States Point Buoy 9.</i>	Black can (M).	In 6 feet.
<i>States Point Buoy 10.</i>	White reflector.	
<i>States Point Buoy 11.</i>	Red nun (M).	In 6 feet.
<i>States Point Buoy 12.</i>	Red reflector.	
<i>States Point Buoy 13.</i>	Black can (M).	At turn into river. In 8 feet.
<i>States Point Buoy 14.</i>	White reflector.	
<i>States Point Buoy 15.</i>	Black can (M).	In 12 feet.
<i>States Point Buoy 16.</i>	White reflector.	
<i>States Point Buoy 17.</i>	Red nun (M).	In 12 feet.
<i>States Point Buoy 18.</i>	Red reflector.	
<i>States Point Buoy 19.</i>	Black can (M).	At turn into river. In 6 feet.
<i>States Point Buoy 20.</i>	Red nun (M).	In 12 feet.
<i>States Point Buoy 21.</i>	Red reflector.	
<i>States Point Buoy 22.</i>	Black can (M).	In 10 feet.
<i>States Point Buoy 23.</i>	White reflector.	
<i>States Point Buoy 24.</i>	Red nun (M).	In 17 feet.
<i>States Point Buoy 25.</i>	Red reflector.	
<i>States Point Buoy 26.</i>	Black can (M).	In 16 feet.
<i>States Point Buoy 27.</i>	White reflector.	
<i>States Point Buoy 28.</i>	Red nun (M).	In 8 feet.
<i>States Point Buoy 29.</i>	Red reflector.	

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>ISLANDS</b>		
<i>International Boundary Buoy A.</i>	White and orange vertical stripes; 1st-cl. can.	10.7 miles 106° from South-east Shoal Light. In 42 feet.
<i>International Boundary Buoy B.</i>	White and orange vertical stripes; 1st-cl. can.	10.8 miles 161° from South-east Shoal Light. In 45 feet.
<i>International Boundary Buoy C.</i>	White and orange vertical stripes; 1st-cl. can.	10.8 miles 133° from South-east Shoal Light. In 34 feet.
<i>Killeys Island Shoal East End Buoy 1.</i>	Black; 2d-cl. can (s)	In 25 feet.
<i>Killeys Island Shoal North Side Buoy 1 A.</i>	White reflector.	In 24 feet.
<i>Oull Island Shoal Buoy 3.</i>	Black; 2d-cl. can (s)	In 24 feet.
<i>Pul-In-Bay Shoal Buoy 1.</i>	White reflector.	Marks a 10-foot shoal. In 13 feet.
<i>Pul-In-Bay Channel Buoy 2.</i>	Black; 3d-cl. spar.	In 8 feet.
<i>Pul-In-Bay Channel Buoy 3.</i>	White reflector.	In 8 feet.
<i>Pul-In-Bay Channel Buoy 4.</i>	Red nun (M)	In 8 feet.
<i>Pul-In-Bay Channel Buoy 5.</i>	Red reflector.	In 8 feet.
<i>North Bass Island Shoal Buoy 8.</i>	Red nun (M)	In 8 feet.
<i>Baldwin Island Outer Channel Buoy 5.</i>	Red reflector.	Westerly of island. In 21 feet.
<i>Baldwin Island Inner Channel Buoy 7.</i>	Red; 3d-cl. spar.	East entrance to channel. In 15 feet.
<i>American Eagle Shoal Buoy 1.</i>	Black; 3d-cl. spar.	Near west end of channel. In 14 feet.
<i>Mouse Island Reef Buoy 3.</i>	White reflector.	Marks easterly limits of shoal. In 18 feet.
	Black; 3d-cl. can (s)	On north side of reef. In 30 feet.
	White reflector.	
<b>WEST END</b>		
<i>Erie Praeving Ground Passage Buoy A.</i>	White and orange horizontal bands; 3d-cl. spar.	3/4 miles 327° from Fort Clinton Light. In 12 feet.
<i>Erie Praeving Ground Passage Buoy B.</i>	White and orange horizontal bands; 3d-cl. spar.	In 17 feet.
<i>Erie Praeving Ground Passage Buoy C.</i>	White and orange horizontal bands; 3d-cl. spar.	In 13 feet.
<i>Erie Praeving Ground Passage Buoy D.</i>	White and orange horizontal bands; 3d-cl. spar.	In 16 feet.
<i>Erie Praeving Ground Passage Buoy E.</i>	White and orange horizontal bands; 3d-cl. spar.	In 17 feet.
<i>Erie Praeving Ground Passage Buoy F.</i>	White and orange horizontal bands; 3d-cl. spar.	In 24 feet.
<i>Erie Praeving Ground Buoy G.</i>	White and orange horizontal bands; 3d-cl. spar.	In 23 feet.
<i>Erie Praeving Ground Buoy H.</i>	White and orange horizontal bands; 3d-cl. spar.	In 30 feet.
<i>Erie Praeving Ground Buoy I.</i>	White and orange horizontal bands; 3d-cl. spar.	In 30 feet.
<i>Erie Praeving Ground Buoy J.</i>	White and orange horizontal bands; 3d-cl. spar.	In 29 feet.
<b>MAUMEE BAY</b>		
<i>Maumee Bay Buoy 1 A.</i>	Black; 2d-cl. can (s)	In 21 feet.
<i>Maumee Bay Buoy 1 A.</i>	White reflector.	In 21 feet.
<i>Maumee Bay Buoy 1 B.</i>	Red; 2d-cl. nun (s)	In 21 feet.
<i>Maumee Bay Buoy 1 B.</i>	Red reflector.	In 21 feet.
<i>Maumee Bay Buoy 3.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Maumee Bay Buoy 4.</i>	White reflector.	In 20 feet.
<i>Maumee Bay Buoy 4 A.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Maumee Bay Buoy 4 A.</i>	Red reflector.	In 20 feet.
<i>Maumee Bay Buoy 5.</i>	Black; 2d-cl. can (s)	In 20 feet.
<i>Maumee Bay Buoy 6.</i>	White reflector.	In 20 feet.
<i>Maumee Bay Buoy 6.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Maumee Bay Buoy 7.</i>	Red reflector.	In 20 feet.
<i>Maumee Bay Buoy 8.</i>	Black; 2d-cl. can (s)	In 20 feet.
<i>Maumee Bay Buoy 8.</i>	White reflector.	In 20 feet.
<i>Maumee Bay Buoy 8.</i>	Red; 2d-cl. nun (s)	In 19 feet.
<i>Maumee Bay Buoy 8.</i>	Red reflector.	

Maintained for International Boundary Commission.

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>MAUMEE BAY</b>		
<i>Maumee Bay Buoy 11.</i>	Black; 2d-cl. can (s)	In 18 feet.
<i>Maumee Bay Buoy 11.</i>	White reflector.	In 18 feet.
<i>Maumee Bay Buoy 11.</i>	Red; 2d-cl. nun (s)	In 18 feet.
<i>Maumee Bay Buoy 11.</i>	Red reflector.	In 18 feet.
<i>Maumee Bay Buoy 13.</i>	Red; 2d-cl. nun (s)	In 16 feet.
<i>Maumee Bay Buoy 13.</i>	Black; 2d-cl. can (s)	In 16 feet.
<i>Maumee Bay Buoy 13.</i>	White reflector.	In 18 feet.
<i>Maumee Bay Buoy 13.</i>	Red; 2d-cl. nun (s)	In 18 feet.
<i>Maumee Bay Buoy 17.</i>	Black; 2d-cl. can (s)	In 18 feet.
<i>Maumee Bay Buoy 17.</i>	White reflector.	In 18 feet.
<i>Maumee Bay Buoy 17.</i>	Red; 2d-cl. nun (s)	In 18 feet.
<i>Maumee Bay Buoy 17.</i>	Red reflector.	In 18 feet.
<i>Maumee Bay Buoy 19.</i>	Black; 2d-cl. can (s)	In 18 feet.
<i>Maumee Bay Buoy 19.</i>	White reflector.	In 18 feet.
<i>Maumee Bay Buoy 19.</i>	Red; 2d-cl. nun (s)	In 18 feet.
<i>Maumee Bay Buoy 19.</i>	Red reflector.	In 18 feet.
<i>Maumee Bay Buoy 19.</i>	Black; 2d-cl. can (s)	In 18 feet.
<i>Maumee Bay Buoy 19.</i>	White reflector.	In 18 feet.
<b>MAUMEE RIVER</b>		
<i>Maumee Bay Buoy 31.</i>	Black; 2d-cl. can (s)	In 18 feet.
<i>Maumee Bay Buoy 31.</i>	White reflector.	In 18 feet.
<i>Maumee Bay Buoy 31.</i>	Red; 2d-cl. nun (s)	In 18 feet.
<i>Maumee Bay Buoy 31.</i>	Red reflector.	In 17 feet.
<i>Ironville Buoy 39.</i>	Black; 3d-cl. can (s)	In 17 feet.
<i>Manhattan Buoy 44.</i>	White reflector.	In 17 feet.
<i>Manhattan Buoy 44.</i>	Red; 3d-cl. nun (s)	In 17 feet.
<i>Manhattan Buoy 44.</i>	Red reflector.	In 25 feet.
<i>Manhattan Buoy 44.</i>	Black; 3d-cl. can	Maintained by the Sinclair Refining Co.
<i>Sinclair Dock Channel Buoy 3.</i>	Red nun (M)	In 20 feet.
<i>Shell Dock Channel Buoy 4.</i>	Red nun (M)	Maintained by the Shell Petroleum Corp.
<i>Shell Dock Channel Buoy 4.</i>	Red and black horizontal bands; nun (M)	In 20 feet.
<i>Shell Dock Channel Buoy 4.</i>	Red; 3d-cl. spar.	Maintained by the Shell Petroleum Corp.
<i>Shell Dock Channel Buoy 4.</i>	Red reflector.	In 18 feet.
<i>Maumee River Buoy 1 A.</i>	Red; 3d-cl. spar.	In 18 feet.
<i>Toledo Turning Basin Buoy 48.</i>	Red; 3d-cl. spar.	In 18 feet.
<i>Toledo Turning Basin Buoy 48.</i>	Red reflector.	In 18 feet.
<i>Toledo Turning Basin Buoy 48.</i>	Red; 3d-cl. spar.	In 18 feet.
<i>Toledo Turning Basin Buoy 48.</i>	Red reflector.	In 16 feet.
<i>Toledo Turning Basin Buoy 50.</i>	Red; 3d-cl. spar.	In 16 feet.
<i>Toledo Turning Basin Buoy 50.</i>	Red reflector.	In 16 feet.
<i>Anderson Elevator Company Channel Buoy 1.</i>	Black; can (M)	In 19 feet.
<i>Anderson Elevator Company Channel Buoy 1.</i>	Red; nun (M)	In 18 feet.
<i>Anderson Elevator Company Channel Buoy 2.</i>	Black; can (M)	In 18 feet.
<i>Anderson Elevator Company Channel Buoy 3.</i>	Red; nun (M)	In 18 feet.
<i>Anderson Elevator Company Channel Buoy 4.</i>	Black; can (M)	In 14 feet.
<i>Anderson Elevator Company Channel Buoy 5.</i>	Black; can (M)	In 14 feet.
<b>MONROE HARBOR</b>		
<i>Monroe Buoy 1.</i>	Red; 2d-cl. nun	In 21 feet.
<i>Monroe Buoy 1.</i>	Red reflector.	In 21 feet.
<i>Monroe Buoy 2.</i>	Black; 2d-cl. can (s)	In 20 feet.
<i>Monroe Buoy 2.</i>	White reflector.	In 20 feet.
<i>Monroe Buoy 4.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Monroe Buoy 4.</i>	Red reflector.	In 20 feet.
<i>Monroe Buoy 5.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Monroe Buoy 5.</i>	Red reflector.	In 20 feet.
<i>Monroe Buoy 5.</i>	Black; 2d-cl. can (s)	In 20 feet.
<i>Monroe Buoy 5.</i>	White reflector.	In 20 feet.
<i>Monroe Buoy 5.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Monroe Buoy 5.</i>	Red reflector.	In 20 feet.
<i>Monroe Buoy 9.</i>	Black; 2d-cl. can (s)	In 20 feet.
<i>Monroe Buoy 9.</i>	White reflector.	In 20 feet.
<i>Monroe Buoy 10.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Monroe Buoy 10.</i>	Red reflector.	In 20 feet.
<i>Monroe Buoy 11.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Monroe Buoy 11.</i>	Red reflector.	In 20 feet.
<i>Monroe Buoy 11.</i>	Black; 2d-cl. can (s)	In 18 feet.
<i>Monroe Buoy 11.</i>	White reflector.	In 18 feet.
<i>Monroe Buoy 11.</i>	Red; 2d-cl. nun (s)	In 20 feet.
<i>Monroe Buoy 11.</i>	Red reflector.	In 20 feet.
<i>Monroe Buoy 15.</i>	Black; 2d-cl. can (s)	In 20 feet.
<i>Monroe Buoy 15.</i>	White reflector.	In 20 feet.

Maintained by Anderson Elevator Co., Maumee, Ohio.

## LAKE ERIE

Name; mark on aid	Description	Location—Depth
<b>MONROE HARBOR</b>		
<i>Monroe Buoy 16</i> .....	Red; 2d-cl. nun (s).....	In 20 feet.
<i>Monroe Buoy 17</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 21 feet.
<i>Monroe Buoy 18</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Monroe Buoy 19</i> .....	Red reflector. Black; 2d-cl. spar.....	In 20 feet.
<i>Monroe Buoy 21</i> .....	White reflector. Black; 2d-cl. spar.....	In 20 feet.

## DETROIT RIVER

Name; mark on aid	Description	Location—Depth
<b>AMHERSTBURG OUTER CHANNEL</b>		
<i>Amherstburg Outer Channel Buoy 6</i> .....	Black; 2d-cl. can (s).....	In 24 feet.
<i>Amherstburg Outer Channel Buoy 4</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 24 feet.
<i>Amherstburg Outer Channel Buoy 7</i> .....	Red reflector. White reflector.	In 24 feet.
<i>Amherstburg Outer Channel Buoy 8</i> .....	Red; 2d-cl. nun (s).....	In 24 feet.
<i>Amherstburg Outer Channel Buoy 11</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 26 feet.
<i>Amherstburg Outer Channel Buoy 11</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Amherstburg Outer Channel Buoy 13</i> .....	Red reflector. Black; 2d-cl. can (s).....	400 feet southeast from Detroit River Lighthouse. In 20 feet.
<i>Amherstburg Outer Channel Buoy 15</i> .....	White reflector.	
<b>LIVINGSTONE OUTER CHANNEL</b>		
<i>Livingstone Outer Channel Buoy 16</i> .....	Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 14</i> .....	Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 13</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 13</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 12</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 11</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 10</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 9</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 8</i> .....	Red reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 8</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 5</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 4</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 5</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 20 feet.
<i>Livingstone Outer Channel Buoy 1</i> .....	Red reflector.	
<b>LIVINGSTONE CHANNEL</b>		
<i>Livingstone Channel Buoy 11</i> .....	Red; 2d-cl. nun (s).....	In 25 feet.
<i>Livingstone Channel Buoy 11</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 25 feet.
<i>Livingstone Channel Buoy 10</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 25 feet.
<i>Livingstone Channel Buoy 9</i> .....	Red reflector. Red; 2d-cl. nun (s).....	In 25 feet.
<i>Livingstone Channel Buoy 3</i> .....	White reflector. Black; 2d-cl. can (s).....	In 25 feet.
<i>Livingstone Channel Buoy 3</i> .....	White reflector. Black; 2d-cl. can (s).....	In 25 feet.
<i>Livingstone Channel Buoy 3</i> .....	White reflector. Black; 2d-cl. can (s).....	In 25 feet.

## DETROIT RIVER

Name; mark on aid	Description	Location—Depth
<b>HICKORY ISLAND CHANNEL</b>		
<i>Hickory Island Channel Buoy 1</i> .....	Black can (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 2</i> .....	White reflector. Red nun (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 3</i> .....	Red reflector. Black can (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 4</i> .....	White reflector. Red nun (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 5</i> .....	Red reflector. Black can (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 7</i> .....	White reflector. Black can (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 10</i> .....	Red reflector. Red nun (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 11</i> .....	Red reflector. Red nun (SD).....	In 10 feet.
<i>Hickory Island Channel Buoy 13</i> .....	Red reflector. Black can (M).....	In 10 feet.
<i>Hickory Island Channel Buoy 16</i> .....	White reflector. Red nun (M).....	In 10 feet.
<i>Powder House Island Buoy</i> .....	Red reflector. Red and black horizontal bands; can (M).....	In 10 feet.
<i>Hickory Island Channel Shoal Buoy</i> .....	Red and black horizontal bands; nun (M).....	In 15 feet.
<i>Powder House Island Channel Buoy 1</i> .....	Black can (M).....	In 11 feet.
<i>Powder House Island Channel Buoy 1</i> .....	White reflector. Red nun (M).....	In 15 feet.
<i>Powder House Island Channel Buoy 2</i> .....	Red reflector. Red nun (M).....	In 6 feet.
<i>Powder House Island Channel Buoy 4</i> .....	Red reflector. Red nun (M).....	In 8 feet.
<i>Powder House Island Channel Buoy 6</i> .....	Red reflector. Red nun (M).....	In 8 feet.
<b>FIGHTING ISLAND CHANNEL</b>		
<i>Fighting Island Channel Buoy 22</i> .....	Red; 2d-cl. nun (s).....	On edge of shoal north of Fighting Island South Light. In 22 feet.
<i>Mama Juda Shoal Buoy</i> .....	Red reflector. Red and black horizontal bands; 2d-cl. can (s).....	At south end of shoal, junction of Fighting Island and Wyandotte channels. In 24 feet.
<i>Fighting Island Channel Buoy 29</i> .....	Black; 2d-cl. tall can.....	On point of shoal south of Mama Juda Light. In 22 feet.
<i>Fighting Island Channel Buoy 23</i> .....	Black; 2d-cl. can (s).....	On west edge of channel. In 22 feet.
<i>Fighting Island Channel Buoy 24</i> .....	White reflector. Red; 2d-cl. nun (s).....	On east edge of channel. In 22 feet.
<i>Fighting Island Channel Buoy 23</i> .....	Red reflector. Red; 2d-cl. nun (s).....	On edge of shoal off north end of island. In 22 feet.
<i>Grosse Ile Basin Buoy 1</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 24 feet.
<i>Grosse Ile Basin Buoy 3</i> .....	White reflector. Black; 2d-cl. can (s).....	In 24 feet.
<i>Grosse Ile Basin Buoy 3</i> .....	White reflector. Black; 2d-cl. can (s).....	In 24 feet.
<i>Grosse Ile Basin Buoy 7</i> .....	White reflector. Black; 2d-cl. can (s).....	In 24 feet.
<i>Grosse Ile Basin Buoy 7</i> .....	White reflector. Black; 2d-cl. can (s).....	In 24 feet.
<b>WYANDOTTE CHANNEL</b>		
<i>Wyandotte Channel Buoy 4</i> .....	Red; 2d-cl. nun (s).....	In 21 feet.
<i>Wyandotte Channel Buoy 6</i> .....	Red reflector. Red; 2d-cl. nun (s).....	In 21 feet.
<i>Wyandotte Channel Buoy 7</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 20 feet.
<i>Wyandotte Channel Buoy 9</i> .....	White reflector. Black; 2d-cl. can (s).....	In 22 feet.
<i>Wyandotte Channel Buoy 18</i> .....	White reflector. Red; 2d-cl. nun (s).....	On east side of channel. In 18 feet.
<i>Wyandotte Channel Buoy 11</i> .....	Red reflector. Red; 2d-cl. nun (s).....	On east side of channel. In 24 feet.
<i>Mud Island Shoal South Buoy</i> .....	Red reflector. Red and black horizontal bands; 2d-cl. can (s).....	On west side of south entrance to this channel and east side south entrance to channel between Mud Island Shoal and mainland. In 21 feet.
<i>Wyandotte Channel Buoy 17</i> .....	Black; 2d-cl. can (s).....	In 23 feet.
<i>Wyandotte Channel Buoy 18</i> .....	White reflector. Red; 2d-cl. nun (s).....	In 23 feet.
<i>Wyandotte Channel Buoy 19</i> .....	Red reflector. Black; 2d-cl. can (s).....	In 23 feet.

## DETROIT RIVER

Name; mark on aid	Description	Location—Depth
<b>TRENTON CHANNEL</b>		
<i>Trenton Channel Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 21 feet.
<i>Trenton Channel Buoy 2</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Trenton Channel Buoy 1</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Trenton Channel Buoy 6</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Trenton Channel Buoy 7</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 21 feet.
<i>White Star Basin Buoy 1</i> .....	Black; 3d-cl. spar.....	Marks channel to White Star Refining Co.'s Dock. In 19 feet. Maintained by Socony Vacuum Oil Co.
<i>White Star Basin Buoy 2</i> .....	Red; 3d-cl. spar.....	
<i>White Star Basin Buoy 3</i> .....	Black; 3d-cl. spar.....	
<i>White Star Basin Buoy 4</i> .....	Red; 3d-cl. spar.....	
<i>Trenton Channel Buoy 12</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	
<i>Trenton Channel Buoy 11</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 21 feet.
<i>Trenton Channel Buoy 16</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	On east side of channel. In 21 feet.
<i>Trenton Channel Buoy 15</i> .....	Black; 3d-cl. can (s)..... White reflector.	On west side of channel. In 21 feet.
<i>Trenton Channel Buoy 17</i> .....	Black; 3d-cl. can (s)..... White reflector.	On west side of channel. In 21 feet.
<i>Trenton Channel Buoy 22</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	On east side of channel. In 21 feet.
<i>Trenton Channel Buoy 21</i> .....	Black; 3d-cl. can (s)..... White reflector.	On west side of channel. In 21 feet.
<i>Trenton Channel Buoy 25</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Trenton Channel Buoy 23</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 24 feet.
<b>ECORSE CHANNEL</b>		
<i>Ecorse Channel Buoy 2</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Ecorse Channel Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	On north side of channel. In 21 feet.
<i>Ecorse Channel Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 21 feet.
<i>Mud Island Shoal North Buoy</i> .....	Red and black horizontal bands; 2d-cl. can (s).	At northeast end of shoal. In 30 feet.
<b>ABOVE FIGHTING ISLAND</b>		
<i>Third Street Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	In 19 feet.
<i>Randolph Street Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	At upper end of shoal. In 23 feet.
<i>Hastings Street Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	Marks isolated shoal. In 25 feet.
<i>Scott Middle Ground Lower Buoy</i> .....	Red and black horizontal bands; 2d-cl. nun (s).	In 20 feet.
<i>Scott Middle Ground Buoy 1A</i> .....	Black; 3d-cl. can (s)..... White reflector.	On southeast side of shoal. In 25 feet.
<i>Scott Middle Ground Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 13 feet.
<i>Scott Middle Ground Buoy 5</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 33 feet.
<i>Scott Middle Ground Buoy 2</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Scott Middle Ground Buoy 1</i> .....	Black; 2d-cl. can (s)..... White reflector.	Off easterly end of the Detroit Boat Club Dock. In 12 feet.
<i>Scott Middle Ground Buoy 3</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 20 feet.
<i>Scott Middle Ground Buoy 5</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 20 feet.
<i>Scott Middle Ground Upper Buoy</i> .....	Red and black horizontal bands; 3d-cl. nun (s)..... White reflector.	In 12 feet.
<i>Intake Pipe Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 17 feet.
<i>Sand Products Buoy 1B</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 19 feet.
<i>Sand Products Buoy 1C</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 19 feet.
<i>Detroit Edison Buoy 8</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 20 feet.
<i>Belle Isle North Channel Buoy 2</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
<i>Belle Isle North Channel Buoy 4</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 18 feet.

## DETROIT RIVER

Name; mark on aid	Description	Location—Depth
<b>ABOVE FIGHTING ISLAND</b>		
<i>Livingstone Memorial Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	On west bank. In 23 feet.
<i>Peack Island Buoy 2</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks shoal area on edge of channel. In 24 feet.

## LAKE ST. CLAIR

<i>Lake St. Clair Buoy 3</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 4</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 5</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 6</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 7</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 8</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 13</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 14</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 15</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 16</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 17</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 18</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 21</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 22</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 23</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 24</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 25</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 26</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 27</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 28</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 29</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 32</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Lake St. Clair Buoy 35</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<i>Lake St. Clair Buoy 38</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Grosse Pointe Dumping Ground Buoy 1</i> .....	Black, white top; 3d-cl. can (s).	In 10 feet.
<i>Grosse Pointe Dumping Ground Buoy 2</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 10 feet.
<i>Grosse Pointe Dumping Ground Buoy 3</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 11 feet.
<i>Grosse Pointe Dumping Ground Buoy 5</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 15 feet.
<i>Grosse Pointe Dumping Ground Buoy 7</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 15 feet.
<i>Grosse Pointe Dumping Ground Buoy 9</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 15 feet.
<i>Grosse Pointe Dumping Ground Buoy 11</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 15 feet.
<i>Grosse Pointe Dumping Ground Buoy 13</i> .....	White reflector. Black, white top; 3d-cl. can (s).	In 15 feet.
<i>Grosse Pointe Dumping Ground Buoy 1</i> .....	White reflector. Red, white top; 3d-cl. nun (s).	In 13 feet.
<i>Grosse Pointe Dumping Ground Buoy 1</i> .....	White reflector. Red, white top; 3d-cl. nun (s).	In 13 feet.
<i>Grosse Pointe Dumping Ground Buoy 6</i> .....	White reflector. Red, white top; 3d-cl. nun (s).	In 16 feet.

## LAKE ST. CLAIR

Name; mark on aid	Description	Location—Depth
<i>Groves Point Dumping Ground Buoy 8.</i>	Red, white top; 3d-cl. nun (S) Red reflector.	In 15 feet.
<i>Groves Point Dumping Ground Buoy 10.</i>	Red, white top; 3d-cl. nun (S) Red reflector.	In 13 feet.
<i>Groves Point Dumping Ground Buoy 11.</i>	Red, white top; 3d-cl. nun (S) Red reflector.	In 14 feet.
<i>Gaukler Point Shoal Buoy 1.</i>	Black; 3d-cl. nun (S) White reflector.	Marks shoal area. In 8 feet.
<i>Clinton River Entrance Buoy 7.</i>	Black; can (M) White reflector.	In 8 feet.
<i>Clinton River Entrance Buoy 6.</i>	Red; nun (M) Red reflector.	In 9 feet.
<i>Clinton River Entrance Buoy 8.</i>	Red; nun (M) Red reflector.	In 8 feet.
<i>Clinton River Entrance Buoy 9.</i>	Black; can (M) White reflector.	In 8 feet.
<i>Clinton River Entrance Buoy 10.</i>	Red; nun (M) Red reflector.	In 8 feet.
<i>Clinton River Entrance Buoy 11.</i>	Black; can (M) White reflector.	In 8 feet.
<i>Clinton River Entrance Buoy 12.</i>	Red; nun (M) Red reflector.	In 8 feet.
<i>Selkridge Field Small Arms Firing Area Buoy A.</i>	White and orange horizontal bands; can (M)	In 5 feet.
<i>Selkridge Field Small Arms Firing Area Buoy B.</i>	White and orange horizontal bands; can (M)	In 7 feet.
<i>Selkridge Field Small Arms Firing Area Buoy C.</i>	White and orange horizontal bands; can (M)	In 8 feet.
<i>Selkridge Field Small Arms Firing Area Buoy D.</i>	White and orange horizontal bands; can (M)	In 6 feet.
Buoy mark limits of Selkridge Field Small Arms Firing Area.		
<b>NORTH CHANNEL</b>		
<i>North Channel Entrance Buoy 1.</i>	Black; 3d-cl. can (S) White reflector.	In 7 feet.
<i>North Channel Entrance Buoy 2.</i>	Red; nun (M) Red reflector.	In 7 feet.
<i>North Channel Entrance Buoy 3.</i>	Black; can (M) White reflector.	In 7 feet.
<i>North Channel Entrance Buoy 4.</i>	Red; nun (M) Red reflector.	In 7 feet.
<i>North Channel Entrance Buoy 5.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 6.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 7.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 8.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 9.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 10.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 11.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 12.</i>	Red; nun (M) Red reflector.	In 12 feet.
<i>North Channel Entrance Buoy 13.</i>	Black; can (M) White reflector.	On north side of channel. In 8 feet.
<i>North Channel Entrance Buoy 14.</i>	Black; can (M) White reflector.	On north side of channel. In 12 feet.
<i>North Channel Entrance Buoy 15.</i>	Red; nun (M) Red reflector.	In 18 feet.
<i>North Channel Entrance Buoy 16.</i>	Black; can (M) White reflector.	On north side of channel. In 18 feet.
<i>North Channel Entrance Buoy 17.</i>	Red; nun (M) Red reflector.	In 20 feet.
<i>North Channel Entrance Buoy 18.</i>	Black; can (M) White reflector.	On north side of channel. In 18 feet.
<i>North Channel Entrance Buoy 19.</i>	Black; can (M) White reflector.	On north side of channel. In 18 feet.
<b>BALTIMORE CHANNEL</b>		
<i>Baltimore Channel Buoy 1.</i>	Red; nun (M) Red reflector.	On west side of entrance to channel. In 8 feet.
<i>Baltimore Channel Buoy 2.</i>	Black; can (M) White reflector.	On east side of channel. In 6 feet.
<i>Baltimore Channel Buoy 3.</i>	Red; nun (M) Red reflector.	On west side of channel. In 10 feet.
<i>Baltimore Channel Buoy 4.</i>	Black; can (M) White reflector.	On east side of channel. In 6 feet.
<i>Baltimore Channel Buoy 5.</i>	Black; can (M) White reflector.	On east side of channel. In 6 feet.

## LAKE ST. CLAIR

Name; mark on aid	Description	Location—Depth
<b>FAIR HAVEN HARBOR</b>		
<i>Fair Haven Buoy 1.</i>	Black; 3d-cl. can (S) White reflector.	On west side of entrance to Fair Haven. In 12 feet.
<i>Fair Haven Buoy 2.</i>	Black; can (M) White reflector.	On west side of channel. In 12 feet.
<i>Fair Haven Buoy 3.</i>	Black; can (M) White reflector.	On west side of channel. In 10 feet.
<i>Fair Haven Buoy 4.</i>	Black; can (M) White reflector.	On west side of channel. In 8 feet.
<b>OLD CHANNEL</b>		
<i>St. Clair Flats Old Channel Buoy 1.</i>	Black; 3d-cl. can (S) White reflector.	North west side of entrance to channel. In 12 feet.
<i>St. Clair Flats Old Channel Buoy 2.</i>	Black; 3d-cl. can (S) White reflector.	In 8 feet.
<i>St. Clair Flats Old Channel Buoy 3.</i>	Red; 3d-cl. nun (S) Red reflector.	In 11 feet.
<i>St. Clair Flats Old Channel Buoy 4.</i>	Red; 3d-cl. nun (S) Red reflector.	In 11 feet.
<i>St. Clair Flats Old Channel Buoy 5.</i>	Red; 3d-cl. nun (S) Red reflector.	In 11 feet.
<i>St. Clair Flats Old Channel Buoy 6.</i>	Red; 3d-cl. nun (S) Red reflector.	In 11 feet.
<i>St. Clair Flats Old Channel Buoy 7.</i>	Red; 3d-cl. nun (S) Red reflector.	In 11 feet.
<i>Old Channel Daybeacon.</i>	Yellow conical tower.	On crib.
<b>MIDDLE CHANNEL</b>		
<i>Middle Channel Entrance Buoy 1.</i>	Black; 3d-cl. can (S) White reflector.	Of entrance to channel. In 12 feet.
<i>Middle Channel Entrance Buoy 2.</i>	Red; nun (M) Red reflector.	On south side of channel, at turn. In 6 feet.
<i>Middle Channel Entrance Buoy 3.</i>	Black; can (M) White reflector.	On north side of channel, at turn. In 6 feet.
<i>Middle Channel Entrance Buoy 4.</i>	Red; nun (M) Red reflector.	On southwest side of channel. In 6 feet.
<i>Middle Channel Entrance Buoy 5.</i>	Black; can (M) White reflector.	On northeast side of channel. In 6 feet.
<i>Middle Channel Entrance Buoy 6.</i>	Red; nun (M) Red reflector.	On south side of channel. In 7 feet.
<i>Middle Channel Entrance Buoy 7.</i>	Black; can (M) White reflector.	On northeast side of channel. In 7 feet.
<i>Middle Channel Entrance Buoy 8.</i>	Red; nun (M) Red reflector.	On south side of channel. In 9 feet.
<i>Middle Channel Entrance Buoy 9.</i>	Black; can (M) White reflector.	On north side of channel. In 9 feet.
<i>Middle Channel Entrance Buoy 10.</i>	Red; nun (M) Red reflector.	On south side of channel. In 10 feet.
<i>Middle Channel Entrance Buoy 11.</i>	Black; can (M) White reflector.	In 10 feet.
<i>Middle Channel Entrance Buoy 12.</i>	Red; nun (M) Red reflector.	In 10 feet.
<b>ST. CLAIR RIVER</b>		
<i>St. Clair Flats Canal Buoy 1.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>St. Clair Flats Canal Buoy 2.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 10.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 11.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 12.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 13.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 14.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 15.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 16.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 17.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 18.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 19.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 20.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 21.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 22.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 23.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 24.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 25.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.
<i>South Channel Buoy 26.</i>	Red; 3d-cl. nun (S) Red reflector.	In 23 feet.
<i>South Channel Buoy 27.</i>	Black; 3d-cl. can (S) White reflector.	In 23 feet.

## ST. CLAIR RIVER

Name; mark on aid	Description	Location—Depth
South Channel Buoy 52.....	Red; 3d-cl. nun (s) Red reflector.	In 25 feet.
South Channel Buoy 53.....	Black; 3d-cl. can (s) White reflector.	In 25 feet.
South Channel Buoy 54.....	Red; 3d-cl. nun (s) Red reflector.	In 25 feet.
Grande Pointe Buoy 59.....	Black; 2d-cl. can (s) White reflector.	In 23 feet.
Dickinson Island Buoy.....	Red and black horizontal bands; 3d-cl. can (s).	In 25 feet.
Woodtick Island Middle Ground Lower Buoy.....	Red and black horizontal bands; 3d-cl. nun (s).	Marks south end of middle ground. In 21 feet.
Woodtick Island Lower End Buoy.....	Red and black horizontal bands; 3d-cl. nun (s).	In 20 feet.
Woodtick Island Upper End Buoy.....	Red and black horizontal bands; 3d-cl. nun (s).	Off Marina City. In 24 feet.
St. Clair Middle Ground Buoy 48.....	Red; 3d-cl. nun (s) Red reflector.	On south end of middle ground. In 25 feet.
Stag Island Shoal Lower Buoy.....	Red and black horizontal bands; 2d-cl. can (s).	In 24 feet.
Stag Island Shoal Buoy 57.....	Red; 3d-cl. nun (s) Red reflector.	In 20 feet.
Stag Island Middle Buoy 54.....	Red; 3d-cl. nun (s) Red reflector.	In 24 feet.

## LAKE HURON

WEST SIDE		
Lake Huron Lightship Station Buoy "L.H.L.S." <sup>6</sup>	Black; 2d-cl. can (s) White reflector.	In 26 feet.
Harbor Beach Buoy 1.....	Black; 3d-cl. can (s) White reflector.	South side of basin. In 22 feet.
Harbor Beach Buoy 3.....	Black; 3d-cl. can (s) White reflector.	West side of basin. In 22 feet.
Harbor Beach Buoy 5.....	Black; 3d-cl. can (s) White reflector.	West side of basin. In 22 feet.
Harbor Beach Buoy 7.....	Black; 3d-cl. can (s) White reflector.	In 22 feet.
Harbor Beach Buoy 9.....	Black; 3d-cl. can (s) White reflector.	In 11 feet.
Harbor Beach Buoy 11.....	Black; 3d-cl. can (s) White reflector.	In 22 feet.
Huron Milling Co. Buoy 1.....	Black; 4th-cl. spar.	In 15 feet. Maintained by Huron Milling Co.
Huron Milling Co. Buoy 2.....	Red; 3d-cl. spar.	In 12 feet. Maintained by Huron Milling Co.
Huron Milling Co. Buoy 3.....	Black; 4th-cl. spar.	In 13 feet. Maintained by Huron Milling Co.
Port Austin Shoal Buoy 3.....	Black; 2d-cl. can (s) White reflector.	On north edge of shoal. In 35 feet.
SAGINAW BAY		
Saginaw Bay Channel Buoy 5.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 6.....	Red; 2d-cl. nun (s) Red reflector.	In 24 feet.
Saginaw Bay Channel Buoy 7.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 8.....	Red; 2d-cl. nun (s) Red reflector.	In 24 feet.
Saginaw Bay Channel Buoy 9.....	Black; 2d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 10.....	Red; 2d-cl. nun (s) Red reflector.	In 24 feet.
Saginaw Bay Channel Buoy 13.....	Black; 2d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 14.....	Red; 2d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw Bay Channel Buoy 15.....	Black; 2d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 16.....	Red; 2d-cl. nun (s) Red reflector.	In 23 feet.
Saginaw Bay Channel Buoy 17.....	Black; 2d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 18.....	Red; 2d-cl. nun (s) Red reflector.	In 23 feet.
Saginaw Bay Channel Buoy 21.....	Black; 2d-cl. can (s) White reflector.	In 18 feet.

## LAKE HURON

Name; mark on aid	Description	Location—Depth
SAGINAW BAY		
Saginaw Bay Channel Buoy 21.....	Red; 2d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw Bay Channel Buoy 22.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 23.....	Red; 2d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw Bay Channel Buoy 24.....	Black; 2d-cl. can (s) White reflector.	In 18 feet.
Saginaw Bay Channel Buoy 25.....	Red; 2d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw Bay Channel Buoy 27.....	Black; 2d-cl. can (s) White reflector.	In 23 feet.
Saginaw Bay Channel Buoy 30.....	Red; 2d-cl. nun (s) Red reflector.	At mouth of river. In 19 feet.
SAGINAW RIVER		
Saginaw River Buoy 22.....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
Saginaw River Buoy 33.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 34.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 35.....	Black; 3d-cl. can (s) White reflector.	In 16 feet.
Saginaw River Buoy 36.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 38.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 40 A.....	Red; 3d-cl. nun (s) Red reflector.	In 20 feet.
Saginaw River Buoy 40 B.....	Red; 3d-cl. nun (s) Red reflector.	In 20 feet.
Saginaw River Buoy 52.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 41.....	Black; 3d-cl. can (s) White reflector.	In 21 feet.
Saginaw River Buoy 44.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 45.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 46.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 44 A.....	Red; 3d-cl. nun (s) Red reflector.	In 15 feet.
Saginaw River Buoy 48.....	Red; 3-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 47.....	Black; 3d-cl. can (s) White reflector.	In 15 feet.
Saginaw River Buoy 50.....	Red; 3d-cl. nun (s) Red reflector.	In 16 feet.
Saginaw River Buoy 51.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 53.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 54.....	White reflector.	In 20 feet.
Saginaw River Buoy 55.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 58 A.....	Red; 3d-cl. nun (s) Red reflector.	In 20 feet.
Saginaw River Buoy 58.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 57 A.....	Black; 3d-cl. can (s) White reflector.	In 20 feet.
Saginaw River Buoy 60 A.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 59.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 61.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 61 A.....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
Saginaw River Buoy 62 A.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 62 B.....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
Saginaw River Buoy 63.....	Black; 3d-cl. can (s) White reflector.	Opposite creek. In 12 feet.



## LAKE HURON

Name; mark on aid	Description	Location—Depth
<b>SAGINAW RIVER</b>		
<i>Saginaw River Buoy 65</i> .....	Black; 3d-cl. can (s) White reflector.	In 20 feet.
<i>Saginaw River Buoy 66</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
<i>Saginaw River Buoy 69</i> .....	Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 68</i> .....	White reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 71</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 76</i> .....	White reflector. Red; 3d-cl. nun (s)	In 19 feet.
<i>Saginaw River Buoy 75</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 74</i> .....	White reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 75</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 77</i> .....	White reflector. Black; 3d-cl. can (s)	Off middle of island. In 16 feet.
<i>Saginaw River Buoy 78</i> .....	White reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 79</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 80</i> .....	White reflector. Red; 3d-cl. nun (s)	In 19 feet.
<i>Saginaw River Buoy 81</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 82</i> .....	White reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 84</i> .....	Red reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 85</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 86</i> .....	White reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 87</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 88A</i> .....	White reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 88</i> .....	Red reflector. Red; 3d-cl. nun (s)	In 18 feet.
<i>Saginaw River Buoy 89</i> .....	Red reflector. Black; 3d-cl. can (s)	In 18 feet.
<i>Saginaw River Buoy 91</i> .....	White reflector. Black; 3d-cl. can (s)	In 18 feet.
<b>WEST SIDE</b>		
<i>Tawas Harbor Buoy 4</i> .....	Red; 3d-cl. nun (s) Red reflector.	Northwest point of shoal. In 21 feet.
<i>North Point Buoy 10</i> .....	Red; 2d-cl. nun (s) Red reflector.	On mid. of shoal, in Thunder Bay. In 33 feet.
<i>Alpena Channel Buoy 1</i> .....	Black; 3d-cl. can (s) White reflector.	In 21 feet.
<i>Alpena Channel Buoy 8</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
<i>Alpena Channel Buoy 4</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
<i>Alpena Channel Buoy 3</i> .....	Black; 3d-cl. can (s) White reflector.	In 21 feet.
<i>Alpena Channel Buoy 6</i> .....	Red; 3d-cl. nun (s) Red reflector.	About 3,200 feet 125° from Alpena Light. In 20 feet.
<i>Thunder Bay Quarries Buoy 9</i> .....	Red spar. Red and white reflector.	In 20 feet.
<i>Thunder Bay Quarries Buoy 1</i> .....	Black spar. White reflector.	In 20 feet.
<i>Thunder Bay Quarries Buoy 4</i> .....	Red spar. Red and white reflector.	In 21 feet.
<i>Thunder Bay Quarries Buoy 3</i> .....	Black spar. White reflector.	In 20 feet.
<i>Thunder Bay Quarries Buoy 8</i> .....	Red spar. Red and white reflector.	In 20 feet.
<i>East Alpena Channel Buoy 8</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.
<i>East Alpena Channel Buoy 8</i> .....	Black; 3d-cl. can (s) White reflector.	In 18 feet.
<i>East Alpena Channel Buoy 4</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 18 feet.

## LAKE HURON

Name; mark on aid	Description	Location—Depth
<b>WEST SIDE</b>		
<i>East Alpena Channel Buoy 5</i> .....	Black can.....	In 17 feet.
<i>East Alpena Channel Buoy 8</i> .....	White reflector. Red nun.....	In 16 feet.
<i>East Alpena Channel Buoy 7</i> .....	White reflector. Black can.....	In 15 feet.
<i>East Alpena Channel Buoy 8</i> .....	White reflector. Red nun.....	In 14 feet.
<i>East Alpena Channel Buoy 9</i> .....	White reflector. Black can.....	In 20 feet.
<i>East Alpena Channel Buoy 10</i> .....	White reflector. Red nun.....	In 14 feet.
<i>East Alpena Channel Buoy 11</i> .....	Black can..... White reflector.	In 14 feet.
<i>Thunder Bay Wreck Buoy</i> .....	Red and black horizontal bands; 2d-cl. spar.	In 17 feet.
<i>Middle Island Buoy 14</i> .....	Red; 2d-cl. nun (s) Red reflector.	Northeast end of shoal. In 24 feet.
<i>Spectacle Reef South End Buoy 14</i> .....	Red; 2d-cl. nun (s) Red reflector.	In 20 feet.
<b>NORTHWEST END</b>		
<i>Reynolds Reef Buoy 1</i> .....	Black; 3d-cl. can (s) White reflector.	In 20 feet.
<i>Reynolds Reef Buoy 2</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 20 feet.
<b>STRAITS OF MACKINAC SOUTH CHANNEL</b>		
<i>Poe Reef Buoy 9</i> .....	Red; 2d-cl. nun (s) Red reflector.	1,100 feet 182½° from Poe Reef Lighthouse. In 24 feet.
<i>Cheboygan Shoal Buoy 5</i> .....	Black; 2d-cl. can (s) White reflector.	On point of shoal, about 0.8 mile 16° from Cheboygan Lighthouse. In 23 feet.
<i>Fourteen-Foot Shoal Buoy 8</i> .....	Black; 2d-cl. can (s) White reflector.	In 29 feet.
<i>Cheboygan Channel Buoy 1</i> .....	Black; 3d-cl. can (s) White reflector.	1,170 feet 201° from Cheboygan Crib Light. In 19 feet.
<i>Cheboygan Channel Buoy 2</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 10 feet.
<i>Cheboygan Buoy 7</i> .....	Black; 2d-cl. can (s) White reflector.	In 22 feet.
<i>Felsa Shoal Buoy 16</i> .....	Red; 2d-cl. nun (s) Red reflector.	On west end of shoal. In 30 feet.
<i>Majors Shoal East Buoy 1</i> .....	Black; 2d-cl. can (s) White reflector.	On east end of shoal. In 26 feet.
<b>NORTH SIDE</b>		
<i>Martin Reef Buoy 1</i> .....	Black; 2d-cl. can (s) White reflector.	South end of shoal. In 30 feet.
<i>Coast Island Shoal Buoy 1</i> .....	Black; 2d-cl. can (s) White reflector.	Marks southeasterly limits of shoal. In 29 feet.
<i>Coast Island Shoal Buoy 2</i> .....	Red; 2d-cl. nun (s) Red reflector.	Marks northwestern limits of shoal. In 29 feet.
<b>ST. MARYS RIVER</b>		
<b>DETOUR PASSAGE</b>		
<i>Detour Passage Buoy 1</i> .....	Red; 2d-cl. nun (s) Red reflector.	Southwest of rocky shoal. In 28 feet.
<i>Detour Shoal Buoy 3</i> .....	Black; 2d-cl. can (s) White reflector.	In 20 feet.
<i>Drummond Island Shoal Buoy 6</i> .....	Red; 2d-cl. nun (s) Red reflector.	In 24 feet.
<b>LOWER RIVER</b>		
<i>Detour Coal Dock Buoy 1</i> .....	Black; 3d-cl. spar White reflector.	In 24 feet.
<i>Pipe Island Buoy 8</i> .....	Red; 2d-cl. nun (s) Red reflector.	In 24 feet.
<i>Pipe Island Twins Buoy 9</i> .....	Black; 1st-cl. can White reflector.	In 28 feet.
<i>Sweet's Point Shoal Buoy 11</i> .....	Black; 2d-cl. can (s) White reflector.	On northerly end of shoal. In 24 feet.
<i>Round Island Buoy 15</i> .....	Black; 2d-cl. can (s) White reflector.	In 25 feet.

## ST. MARYS RIVER

Name; mark on aid	Description	Location—Depth
<b>LOWER RIVER</b>		
Round Island Buoy 16.....	Red; 2d-cl. nun (s)..... Red reflector.	In 25 feet.
Round Island Buoy 17.....	Black; 2d-cl. can (s)..... White reflector.	In 25 feet.
Round Island Buoy 18.....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
Point aux Frenes Buoy 22.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
<b>LAKE MUNUSCONG</b>		
Lake Munuscong Buoy 25.....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
Lake Munuscong Buoy 28.....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
Lake Munuscong Buoy 29.....	Black; 2d-cl. can (s)..... White reflector.	In 18 feet.
Lake Munuscong Buoy 31.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Lake Munuscong Buoy 32.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Lake Munuscong Buoy 33.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Lake Munuscong Buoy 35.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Lake Munuscong Buoy 38.....	Red; 2d-cl. nun (s)..... Red reflector.	Off Everens Point. In 20 feet.
<b>SAILORS ENCAMPMENT CHANNEL</b>		
Encampment Channel Buoy 3.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Encampment Channel Buoy 4.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Encampment Channel Buoy 5.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Encampment Channel Buoy 6.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Encampment Channel Buoy 10.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Encampment Channel Buoy 12.....	Red; 2d-cl. nun (s)..... Red reflector.	In 20 feet.
Encampment Channel Buoy 13.....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<b>MUNUSCONG CHANNEL</b>		
Mirre Point Buoy 15.....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
Munuscong Channel Buoy 17.....	Black; 1st-cl. can..... White reflector.	In 21 feet.
Munuscong Channel Buoy 18.....	Red; 2d-cl. nun (s)..... Red reflector.	Abreast preceding. In 21 feet.
Munuscong Channel Buoy 19.....	Black; 2d-cl. can (s)..... White reflector.	At elbow of channel. In 21 feet.
Munuscong Channel Buoy 20.....	Red; 2d-cl. nun (s)..... Red reflector.	Abreast preceding. In 21 feet.
Munuscong Channel Buoy 21.....	Black; 2d-cl. can (s)..... White reflector.	In 21 feet.
Munuscong Channel Buoy 22.....	Red; 2d-cl. nun (s)..... Red reflector.	Abreast preceding. In 21 feet.
Munuscong Channel Buoy 25.....	Black; 2d-cl. can (s)..... White reflector.	In 21 feet.
Munuscong Channel Buoy 26.....	Red; 2d-cl. nun (s)..... Red reflector.	In 21 feet.
Munuscong Channel Buoy 28.....	Red; 2d-cl. nun (s)..... Red reflector.	In 21 feet.
Munuscong Channel Buoy 30.....	Red; 2d-cl. nun (s)..... Red reflector.	In 21 feet.
Harwood Point West Range Front Daybeacon.	Red square tower.....	On Harwood Point, 30 feet high. Range lighted when lighted buoys are not on station.
Harwood Point West Range Rear Daybeacon.	Red square tower.....	1,000 feet 356¼° from front daybeacon. 61 feet high.
Dark Hole West Range Front Daybeacon.	White square tower.....	On Rains Island, 33 feet high. Range lighted when lighted buoys are not on station.
Dark Hole West Range Rear Daybeacon.	White daymark on black square tower.	630 feet 178¼° from front daybeacon. 82 feet high.

## ST. MARYS RIVER

Name; mark on aid	Description	Location—Depth
<b>MIDDLE NEEBISH CHANNEL</b>		
Harwood Point Buoy.....	Red and black horizontal bands; 2d-cl. nun (s).....	Intersection of Middle Neebish and Lake George Channels. In 22 feet.
Middle Neebish Channel Buoy 52.....	Red; 2d-cl. nun (s)..... Red reflector.	In 21 feet.
Middle Neebish Channel Buoy 53.....	Black; 2d-cl. can (s)..... White reflector.	In 27 feet.
Middle Neebish Channel Buoy 54.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 55.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 57.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Middle Neebish Channel Buoy 58.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 59.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Middle Neebish Channel Buoy 61.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 62.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Middle Neebish Channel Buoy 63.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 64.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 65.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Middle Neebish Channel Buoy 66.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 67.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Middle Neebish Channel Buoy 68.....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
Middle Neebish Channel Buoy 69.....	Black; 2d-cl. can (s)..... White reflector.	In 22 feet.
Middle Neebish Channel Buoy 71.....	Black; 2d-cl. can (s)..... White reflector.	In 20 feet.
Middle Neebish South Range Front Daybeacon.	Black square tower.....	Off north end of Neebish Island, 35 feet high. Range lighted when lighted buoys are not on station.
Middle Neebish South Range Rear Daybeacon.	Red square tower.....	6,000 feet 291¼° from front daybeacon. 39 feet high.
<b>LAKE NICOLET</b>		
Lake Nicolet Buoy 65.....	Black; 2d-cl. can (s)..... White reflector.	In 26 feet.
Lake Nicolet Buoy 64.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
Lake Nicolet Buoy 65.....	Black; 2d-cl. can (s)..... White reflector.	In 26 feet.
Lake Nicolet Buoy 66.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
Lake Nicolet Buoy 69.....	Black; 2d-cl. can (s)..... White reflector.	In 26 feet.
Lake Nicolet Buoy 60.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
Lake Nicolet Buoy 61.....	Black; 2d-cl. can (s)..... White reflector.	In 26 feet.
Lake Nicolet Buoy 62.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
Lake Nicolet Buoy 66.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
Lake Nicolet Buoy 68.....	Red; 2d-cl. nun (s)..... Red reflector.	In 26 feet.
Lower Nicolet West Range Front Daybeacon.	White cylindrical tower.....	On north end of Neebish Island, 53 feet high. Range lighted when lighted buoys are not on station.
Lower Nicolet West Range Rear Daybeacon.	White cylindrical tower.....	1,753 feet 156¼° from front daybeacon. 96 feet high.
<b>WEST NEEBISH CHANNEL</b>		
(For downbound vessels only)		
West Neebish Channel Buoy 50.....	Red; 3d-cl. spar..... Red reflector.	45 feet 264° from West Neebish Channel Light 50. In 27 feet. Marks extent of rip rap encroachment in channel.
West Neebish Channel Buoy 48.....	Red; 2d-cl. nun (s)..... Red reflector.	In 25 feet.
West Neebish Channel Buoy 47.....	Black; 2d-cl. can (s)..... White reflector.	In 25 feet.
West Neebish Channel Buoy 45.....	Black; 3d-cl. spar..... White reflector.	64 feet 64° from West Neebish Channel Light 45. In 28 feet. Marks extent of rip rap encroachment in channel.
West Neebish Channel Buoy 40.....	Red; 2d-cl. nun (s)..... Red reflector.	In 25 feet.
West Neebish Channel Buoy 39.....	Black; 2d-cl. can (s)..... White reflector.	In 25 feet.



## ST. MARYS RIVER

Name; mark on aid	Description	Location—Depth
<b>LAKE GEORGE CHANNEL</b>		
<i>Jenkins Rock Buoy 25</i> .....	Black; 4th-cl. spar.....	In 15 feet.
<i>Merchants Rock Buoy 16</i> .....	Red; 3d-cl. spar..... Red reflector.	In 15 feet.
<i>Merchants Rock Buoy 27</i> .....	Black; 3d-cl. spar..... White reflector.	In 15 feet.
<i>Topsail Island Buoy 13</i> .....	Red; 3d-cl. spar..... Red reflector.	In 19 feet.
<i>Milton Point Buoy 29</i> .....	Black; 3d-cl. spar..... White reflector.	In 19 feet.
<b>VIDAL SHOALS CHANNEL</b>		
<i>Vidal Shoals Channel Range Daybeacon</i> .....	White, oval, horizontally slatted daymark.	655 feet 225° from Vidal Shoals Channel Range Front Light.
<i>Vidal Shoals Cross Channel Buoy 1</i> .....	Black; 2d-cl. can (s)..... White reflector.	On northerly point of shoal area. In 30 feet.
<i>Vidal Shoals Channel Buoy 3</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 25 feet.
<i>Sixteen Foot Shoal Buoy 8</i> .....	Red; 3d-cl. nun (s).....	In 17 feet.
<i>Vidal Shoals Channel Buoy 7</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 24 feet.
<b>POINTE AUX PINS RANGE</b>		
<i>Pointe aux Pins Channel Buoy 10</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Pointe aux Pins Channel Buoy 12</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Pointe aux Pins Channel Buoy 11</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 24 feet.
<b>POINTE AUX PINS TO ROUND ISLAND</b>		
<i>Pointe aux Pins Buoy 19</i> .....	Black; 2d-cl. can (s)..... White reflector.	Marks turn. In 30 feet.
<i>Cedar Point Buoy 23</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 33 feet.
<i>Cedar Point Buoy 24</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 27 feet.
<i>Cedar Point Buoy 25</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 27 feet.
<i>Cedar Point Buoy 26</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.
<i>Cedar Point Buoy 28</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 27 feet.
<b>ROUND ISLAND TO WHITEFISH BAY</b>		
<i>Birch Point Range Daybeacon</i> .....	White (triangle against orange background) illuminated against sky.	2,970 feet 129½° from Birch Point Range Rear Light.
<i>Round Island Buoy 33</i> .....	Black; 2d-cl. can (s)..... White reflector.	At intersection of channel bank and Birch Point Range axis. In 27 feet.
<i>Round Island Buoy 35</i> .....	Black; 2d-cl. can (s)..... White reflector.	In 27 feet.
<i>Round Island Buoy 36</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 27 feet.
<i>Point Iroquois Buoy 40</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Point Iroquois Shoal Buoy 41</i> .....	Black; 2d-cl. can (s)..... White reflector.	East edge of Point Iroquois Shoal. In 25 feet.
<i>Point Iroquois Buoy 42</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Point Iroquois Shoal Buoy 43</i> .....	Black; 2d-cl. can (s)..... White reflector.	Marks northeast edge of shoal. In 25 feet.

## LAKE SUPERIOR

<b>SOUTH SIDE</b>		
<i>Grand Island Harbor Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	On extreme end of shoal off old lighthouse. In 20 feet.
<i>Williams Landing Buoy 1</i> .....	Black; 4th-cl. spar..... White reflector.	Off southwest end of Grand Island. In 22 feet.
<i>Marquette Harbor Buoy 1</i> .....	Black; 2d-cl. can (s)..... White reflector.	Marks submerged crib at outer end of Merchandise Wharf. In 27 feet.
<i>Isig Bay Point Buoy 1</i> .....	Black; 3d-cl. spar..... White reflector.	North end of rocky shoal. In 20 feet.
<i>Point Abbeys Shoal Buoy 6</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	In 22 feet.

## LAKE SUPERIOR

Name; mark on aid	Description	Location—Depth
<b>KEWEENAW WATERWAY</b>		
<i>Keeweenaw Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Keeweenaw Buoy 7</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Keeweenaw Buoy 10</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks southeast corner Portage River Harbor of Refuge. In 25 feet.
<i>Keeweenaw Buoy 12</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks northeast corner Portage River Harbor of Refuge. In 25 feet.
<i>Keeweenaw Buoy 23</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Keeweenaw Buoy 35</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	On east side of north end of cut. In 25 feet.
<b>PORTAGE LAKE</b>		
<i>Grosspoint Middle Ground Shoal Buoy 24</i> .....	Red; 3d-cl. nun (s).....	In 20 feet.
<i>Grosspoint Buoy 25</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks northwest end of middle ground. In 22 feet.
<i>Snowshoe Island South Buoy 57</i> .....	Black; 3d-cl. can (s)..... White reflector.	Marks rocky shoal. In 20 feet.
<i>Snowshoe Island North Buoy 59</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 20 feet.
<i>College of Mines Buoy 45</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Ripley Shoal Buoy 42</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 24 feet.
<i>Cole Creek Buoy 44</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks edge of channel at bend. In 22 feet.
<i>Cole Creek Buoy 43</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Svedavann Creek Buoy 60</i> .....	Red; 2d-cl. nun (s)..... Red reflector.	Easterly side of channel. In 24 feet.
<i>Harrington Island Shoal Buoy 34</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 18 feet.
<i>Harrington Island Buoy 63</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 20 feet.
<i>High Point Buoy 63</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Schlitz Creek Buoy 67</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>High Point Buoy 68</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Marks turn on east side of channel. In 26 feet.
<i>Schlitz Creek Buoy 69</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Mill Point Buoy 61</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Mill Point Buoy 61</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Mill Point Buoy 63</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Mill Point Buoy 61</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Rouleau Point Buoy 65</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Rouleau Point Buoy 66</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Rouleau Point Buoy 67</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Rouleau Point Buoy 68</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Rouleau Point Buoy 70</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	In 25 feet.
<i>Lily Pond Buoy 71</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Lily Pond Buoy 72</i> .....	Black; 3d-cl. can (s)..... White reflector.	In 25 feet.
<i>Lamberts Shoal Buoy 2</i> .....	Red; 3d-cl. nun (s)..... Red reflector.	Opposite Centennial Stamp Mills. In 20 feet.
<i>Torch Bay Buoy 3</i> .....	Black; 3d-cl. can (s)..... White reflector.	East end of bay. In 20 feet.
<b>SOUTH SIDE</b>		
<i>Gull Rock Buoy 4</i> .....	Red; 3d-cl. spar..... Red reflector.	About 0.7 mile 195° from Gull Rock Light-house. In 20 feet.
<i>Ashland Harbor Dump Ground Buoy 1</i> .....	Black; 3d-cl. can (s)..... White reflector.	Marks west end of shoal. In 21 feet.
<i>Ashland Ore Docks Buoy 2</i> .....	Red; 3d-cl. spar..... Red reflector.	In 24 feet.

## LAKE SUPERIOR

Name; mark on aid	Description	Location—Depth
<b>SOUTH SIDE</b>		
Ashland Ore Docks Buoy 4.....	Red; 3d-cl. spar.....	In 24 feet.
Ashland Ore Docks Buoy 5.....	Red reflector. Black; 3d-cl. can (s).....	In 22 feet.
Ashland Ore Docks Buoy 7.....	White reflector. Black; 3d-cl. can (s).....	In 22 feet.
Ashland Ore Docks Buoy 8.....	White reflector. Red; 3d-cl. nun (s).....	In 22 feet.
Ashland Ore Docks Buoy 11.....	Red reflector. Black; 3d-cl. can (s).....	Marks southerly limit of dredged harbor.
Ashland Harbor Buoy 1.....	White reflector. Black; 3d-cl. can (s).....	In 27 feet.
Ashland Harbor Buoy 2.....	White reflector. Red; 3d-cl. nun (s).....	In 20 feet.
Ashland Harbor Buoy 3.....	Red reflector. Black; 3d-cl. can (s).....	In 24 feet.
Ashland Harbor Buoy 5.....	White reflector. Black; 3d-cl. can (s).....	In 20 feet.
Ashland Harbor Buoy 6.....	White reflector. Red; 3d-cl. nun (s).....	In 24 feet.
Ashland Harbor Buoy 8.....	Red reflector. Red; 3d-cl. nun (s).....	In 20 feet.
Ashland Harbor Buoy 18.....	Red reflector. Red; 3d-cl. nun (s).....	In 20 feet.
Relax Coal Co. Dock Buoy 1.....	Red reflector. Black; 3d-cl. spar.....	At east side of entrance. In 29 feet. Main- lained by Relax Coal Co.
Relax Coal Co. Dock Buoy 2.....	Red; 3d-cl. spar.....	At west side of entrance. In 12 feet. Main- lained by Relax Coal Co.
<b>APOSTLE ISLANDS</b>		
Marina Shoal Buoy 3.....	Black; 3d-cl. spar.....	On shoal off south end of Raspberry Island.
Sand Island Buoy 4.....	White reflector. Red; 3d-cl. spar.....	0.3 mile north from 18-foot spot. In 20 feet.
<b>CORNUCOPIA HARBOR</b>		
Cornucopia Harbor Buoy 1.....	Black; 3d-cl. spar.....	In 10 feet.
Cornucopia Harbor Buoy 2.....	White reflector. Red; 3d-cl. spar.....	In 10 feet.
Cornucopia Harbor Buoy 4.....	Red reflector. Red; 3d-cl. spar.....	In 10 feet.
Cornucopia Harbor Buoy 5.....	Red reflector. Black; 3d-cl. spar.....	In 10 feet.
<b>SUPERIOR HARBOR BASIN</b>		
Superior Harbor Basin Buoy 3.....	Black; 3d-cl. can (s).....	In 25 feet.
Superior Harbor Basin Buoy 4.....	White reflector. Red; 3d-cl. nun (s).....	In 25 feet.
Superior Harbor Basin Buoy 5.....	Red reflector. Black; 3d-cl. can (s).....	Marks entrance to slip. In 25 feet.
Superior Harbor Basin Buoy 7.....	White reflector. Black; 3d-cl. can (s).....	At turn off Pitsburgh & Ashland Coal Dock. In 25 feet.
<b>SUPERIOR BAY</b>		
Superior Front Channel Buoy 1.....	Black; 3d-cl. can (s).....	In 25 feet.
Superior Front Channel Buoy 2.....	White reflector. Black; 3d-cl. can (s).....	In 25 feet.
Superior Front Channel Buoy 4.....	White reflector. Red; 3d-cl. nun (s).....	In 25 feet.
Superior Front Channel Buoy 5.....	Red reflector. Black; 3d-cl. can (s).....	In 25 feet.
Superior Front Channel Buoy 7.....	White reflector. Black; 3d-cl. can (s).....	In 25 feet.
Superior Front Channel Buoy 8.....	Red reflector. Red; 3d-cl. nun (s).....	In 25 feet.
Superior Front Channel Buoy 9.....	Red reflector. Black; 3d-cl. can (s).....	In 25 feet.
Superior Front Channel Buoy 12.....	White reflector. Red; 3d-cl. nun (s).....	In 25 feet.
Superior Front Channel Buoy 11.....	Red reflector. Black; 3d-cl. can (s).....	In 25 feet.
Superior Front Channel Buoy 18.....	White reflector. Red; 3d-cl. nun (s).....	In 25 feet.
East Gate Basin Buoy 20.....	Red reflector. Red; 3d-cl. nun (s).....	In 25 feet.

## LAKE SUPERIOR

Name; mark on aid	Description	Location—Depth
<b>ALLOUEZ BAY</b>		
Allouez Bay Entrance Buoy 1.....	Black; 3d-cl. can (s).....	In 23 feet.
Allouez Bay Channel Buoy 5.....	White reflector. Black; 3d-cl. can (s).....	In 22 feet.
Allouez Bay Channel Buoy 7.....	White reflector. Black; 3d-cl. can (s).....	In 22 feet.
Allouez Bay Channel Buoy 8.....	White reflector. Red; 3d-cl. nun (s).....	In 22 feet.
Allouez Bay Channel Buoy 4.....	Red reflector. Red; 3d-cl. nun (s).....	In 22 feet.
<b>DULUTH HARBOR</b>		
Breakwater Buoy 2.....	Red; 3d-cl. nun (s).....	2,400 foot north of Duluth north pier. Marks outer end of old breakwater. In 21 feet.
Duluth Harbor Basin Buoy 1.....	Black; 3d-cl. can (s).....	In 23 feet.
Duluth Harbor Basin Buoy 5.....	White reflector. Black; 3d-cl. can (s).....	In 25 feet.
Duluth Harbor Basin Buoy 7.....	White reflector. Black; 3d-cl. can (s).....	In 23 feet.
Duluth Harbor Basin Buoy 8.....	White reflector. Red; 3d-cl. nun (s).....	In 23 feet.
Duluth Harbor Basin Buoy 4.....	Red reflector. Red; 3d-cl. nun (s).....	In 23 feet.
Duluth Harbor Basin Buoy 6.....	Red; 3d-cl. nun (s).....	At beginning of turn into East Gate Basin.
Rice Point Turn Buoy 10.....	Red reflector. Red; 3d-cl. nun (s).....	In 25 feet.
<b>ST. LOUIS BAY</b>		
West Gate Basin Buoy 1.....	Black; 3d-cl. can (s).....	At turn into North Channel. In 21 feet.
North Channel Buoy 2.....	White reflector. Black; 3d-cl. can (s).....	In 21 feet.
North Channel Buoy 1.....	White reflector. Red; 3d-cl. nun (s).....	In 21 feet.
Twenty-First Avenue Channel Buoy 1.....	Red reflector. Red; 3d-cl. spar.....	In 21 feet.
Twenty-First Avenue Channel Buoy 1.....	Red reflector. Black; 3d-cl. spar.....	In 23 feet.
Twenty-First Avenue Channel Buoy 4.....	White reflector. Red; 3d-cl. spar.....	In 20 feet.
North Channel Buoy 9.....	Red reflector. Red; 3d-cl. nun (s).....	In 21 feet.
North Channel Buoy 7.....	Red reflector. Black; 3d-cl. can (s).....	In 21 feet.
North Channel Buoy 8.....	White reflector. Black; 3d-cl. can (s).....	In 21 feet.
North Channel Buoy 3.....	White reflector. Red; 3d-cl. nun (s).....	In 22 feet.
North Channel Buoy 10.....	Red reflector. Red; 3d-cl. nun (s).....	In 23 feet.
North Channel Buoy 15.....	Red reflector. Black; 3d-cl. can (s).....	In 21 feet.
North Channel Buoy 17.....	White reflector. Black; 3d-cl. can (s).....	In 21 feet.
North Channel Buoy 14.....	Red; 3d-cl. nun (s).....	In 21 feet.
<b>ST. LOUIS RIVER</b>		
St. Louis River Entrance Buoy 1.....	Black; 3d-cl. can (s).....	In 21 feet.
St. Louis River Buoy 2.....	White reflector. Red; 3d-cl. nun (s).....	In 21 feet.
St. Louis River Buoy 3.....	Red reflector. Black; 3d-cl. can (s).....	In 21 feet.
St. Louis River Buoy 5.....	White reflector. Black; 3d-cl. can (s).....	In 21 feet.
St. Louis River Buoy 7.....	White reflector. Black; 3d-cl. can (s).....	In 21 feet.
St. Louis River Buoy 8.....	White reflector. Red; 3d-cl. nun (s).....	In 21 feet.
St. Louis River Buoy 10.....	Red reflector. Red; 3d-cl. nun (s).....	In 21 feet.
St. Louis River Buoy 11.....	Red reflector. Black; 3d-cl. can (s).....	In 21 feet.
St. Louis River Buoy 14.....	White reflector. Red; 3d-cl. nun (s).....	In 21 feet.
St. Louis River Buoy 15.....	Red reflector. Black; 3d-cl. spar.....	In 21 feet.
St. Louis River Buoy 16.....	White reflector. Red; 3d-cl. spar.....	In 21 feet.

## LAKE SUPERIOR

Name; mark on aid	Description	Location—Depth
<b>ST. LOUIS RIVER</b>		
<i>St. Louis River Buoy 17</i> .....	Black; 3d-cl. spar White reflector.	In 20 feet.
<i>St. Louis River Buoy 18</i> .....	Red; 3d-cl. spar. Red reflector.	In 21 feet.
<i>St. Louis River Buoy 19</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 19</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 21</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 21</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 21</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 21</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 21</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 21</i> .....	White reflector.	In 20 feet.
<i>St. Louis River Buoy 25</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 25</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 25</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 27</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 27</i> .....	White reflector.	In 20 feet.
<i>St. Louis River Buoy 27</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 31</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 31</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 30</i> .....	Red; 3d-cl. spar. Red reflector.	In 20 feet.
<i>St. Louis River Buoy 31A</i> .....	Black; 3d-cl. spar. White reflector.	In 24 feet.
<i>St. Louis River Buoy 32</i> .....	White reflector.	In 14 feet.
<i>St. Louis River Buoy 32</i> .....	Red; 3d-cl. spar. Red reflector.	In 14 feet.
<i>St. Louis River Buoy 32</i> .....	Black; 3d-cl. spar. White reflector.	In 18 feet.
<i>St. Louis River Buoy 34</i> .....	Red; 3d-cl. spar. Red reflector.	In 23 feet.
<i>St. Louis River Buoy 34</i> .....	Black; 3d-cl. spar. White reflector.	In 10 feet.
<i>St. Louis River Buoy 35</i> .....	Red; 3d-cl. spar. Red reflector.	In 17 feet.
<i>St. Louis River Buoy 35</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 35</i> .....	White reflector.	In 21 feet.
<i>St. Louis River Buoy 35</i> .....	Red; 3d-cl. spar. Red reflector.	In 16 feet.
<i>St. Louis River Buoy 35</i> .....	Red; 3d-cl. spar. Red reflector.	In 23 feet.
<i>St. Louis River Buoy 44</i> .....	Red; 3d-cl. spar. Red reflector.	In 23 feet.
<i>St. Louis River Buoy 44</i> .....	Red; 3d-cl. spar. Red reflector.	In 18 feet.
<i>St. Louis River Buoy 47</i> .....	Red; 3d-cl. spar. Red reflector.	In 13 feet.
<i>St. Louis River Buoy 47</i> .....	Black; 3d-cl. spar. White reflector.	In 13 feet.
<i>St. Louis River Buoy 49</i> .....	Black; 3d-cl. spar. White reflector.	In 13 feet.
<i>St. Louis River Buoy 49</i> .....	Red; 3d-cl. spar. Red reflector.	In 13 feet.
<i>St. Louis River Buoy 51</i> .....	Black; 3d-cl. spar. White reflector.	In 17 feet.
<i>St. Louis River Buoy 51</i> .....	Red; 3d-cl. spar. Red reflector.	In 16 feet.
<i>St. Louis River Buoy 53</i> .....	Black; 3d-cl. spar. White reflector.	In 13 feet.
<i>St. Louis River Buoy 51</i> .....	Red; 3d-cl. spar. Red reflector.	In 14 feet.
<i>St. Louis River Buoy 53</i> .....	Black; 3d-cl. spar. White reflector.	In 13 feet.
<i>St. Louis River Buoy 53</i> .....	White reflector.	In 16 feet.
<i>St. Louis River Buoy 57</i> .....	Black; 3d-cl. spar. White reflector.	In 15 feet.
<i>St. Louis River Buoy 58</i> .....	Red; 3d-cl. spar. Red reflector.	In 19 feet.
<i>St. Louis River Buoy 59</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<i>St. Louis River Buoy 60</i> .....	Red; 3d-cl. spar. Red reflector.	In 22 feet.
<i>St. Louis River Buoy 61</i> .....	Black; 3d-cl. spar. White reflector.	In 24 feet.

## LAKE SUPERIOR

Name; mark on aid	Description	Location—Depth
<b>ST. LOUIS BAY</b>		
<i>South Channel Buoy 2</i> .....	Red; 3d-cl. nun (s) Red reflector.	Junction of West Gate Basin with South Channel. In 25 feet.
<i>South Channel Buoy 4</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 25 feet.
<i>South Channel Buoy 4</i> .....	Black; 3d-cl. spar. White reflector.	In 25 feet.
<i>South Channel Buoy 3</i> .....	Black; 3d-cl. nun (s) White reflector.	In 21 feet.
<i>South Channel Buoy 1A</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
<i>South Channel Buoy 6</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
<i>South Channel Buoy 8</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
<i>South Channel Buoy 7</i> .....	Black; 3d-cl. nun (s) White reflector.	At entrance to slip. In 21 feet.
<i>South Channel Buoy 10</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 21 feet.
<i>Cross Channel Buoy 1</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 26 feet.
<i>Cross Channel Buoy 3</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 23 feet.
<i>Cross Channel Buoy 3</i> .....	Black; 3d-cl. nun (s) White reflector.	In 20 feet.
<b>NORTHWEST SIDE</b>		
<i>Agate Bay Harbor Buoy 8</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 26 feet.
<i>Agate Bay Harbor Buoy 4</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 20 feet.
<i>Agate Bay Harbor Buoy 6</i> .....	Red; 3d-cl. nun (s) Red reflector.	In 26 feet.
<b>GRAND MARAIS HARBOR</b>		
<i>Grand Marais Harbor Buoy 1</i> .....	Black; 3d-cl. spar White reflector.	In 20 feet.
<i>Grand Marais Harbor Buoy 3</i> .....	Black; 3d-cl. spar White reflector.	In 17 feet.
<i>Grand Marais Harbor Buoy 5</i> .....	Black; 3d-cl. spar White reflector.	In 18 feet.
<i>Grand Marais Harbor Buoy 7</i> .....	Black; 3d-cl. spar. White reflector.	In 17 feet.
<i>Grand Marais Harbor Buoy 9</i> .....	Black; 3d-cl. spar. White reflector.	In 20 feet.
<b>GRACE HARBOR</b>		
<i>West End Buoy 8</i> .....	Red; 3d-cl. spar Red reflector.	Marks west edge of 14-foot spot. In 20 feet.
<i>Booth Island Passage Buoy 1</i> .....	Black; 3d-cl. steel spar (s)	Marks extreme end of shoal. In 24 feet.
<i>Booth Island Passage Buoy 1A</i> .....	Black; 3d-cl. steel spar (s)	In 26 feet. Maintained by National Park Service.
<b>WASHINGTON HARBOR</b>		
<i>Barnum Island Shoal Buoy 5</i> .....	Black; 3d-cl. spar.....	Marks Booth Island Passage. In 24 feet. Maintained by National Park Service.
<b>HOUGHTON POINT</b>		
<i>Houghton Point Channel Buoy 1</i> .....	Black; 3d-cl. steel spar (s)	In 24 feet. Maintained by National Park Service.
<i>Houghton Point Channel Buoy 3</i> .....	Black; 3d-cl. steel spar (s)	In 24 feet. Maintained by National Park Service.
<b>SISKIWIIT BAY</b>		
<i>Malone Bay Buoy 6</i> .....	Black; 3d-cl. steel spar (s)	In 24 feet. Maintained by National Park Service.
<b>ROCK HARBOR</b>		
<i>Middle Island Passage Buoy 1</i> .....	Black; 3d-cl. steel spar (s)	In 24 feet. Maintained by National Park Service.
<i>Middle Island Passage Buoy 2</i> .....	Red; 3d-cl. steel spar (s)	In 24 feet. Maintained by National Park Service.
<i>Middle Island Passage Buoy 3</i> .....	Black; 3d-cl. spar..... White reflector.	In 24 feet.
<i>West End Buoy 1</i> .....	Black; 3d-cl. steel spar (s)	In 18 feet. Maintained by National Park Service.
<i>West End Buoy 2</i> .....	Red; 3d-cl. steel spar (s)	In 17 feet. Maintained by National Park Service.
<i>Blake Point Buoy 1</i> .....	Black; 3d-cl. spar White reflector.	In 24 feet.
<i>Blake Point Three-Foot Shoal Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar	On shoal, off Blake Point. In 20 feet.

## RAINY LAKE

Name; mark on aid	Description	Location—Depth
Canoe Channel Daybeacon 4....	Red triangular daymark on pole, concrete base.	On rock southeasterly of southerly end of Roberts Island. 18 feet high.
Canoe Channel Daybeacon 5....	Black rectangular daymark on pole, concrete base.	On rock southeasterly of southerly end of Roberts Island. 16 feet high.
Canoe Channel Daybeacon 7....	Black rectangular daymark on pole, concrete base.	On rock westerly of the southwesterly end of Stop Island. 16 feet high.
Canoe Channel Daybeacon 8....	Red triangular daymark on pole, concrete base.	Off southwesterly end of Stop Island. 16 feet high.
Canoe Channel Daybeacon 10....	Red triangular daymark on pole, concrete base.	On rock wash, off westerly end of Grassy Island. 16 feet high.
Canoe Channel Daybeacon 12....	Red triangular daymark on pole, concrete base.	On Bald Rock Point. 16 feet high.
Canoe Channel Daybeacon 13....	Black rectangular daymark on pole, concrete base.	On submerged rock off most southerly island of the Aeroplane Island group. 16 feet high.
Canoe Channel Daybeacon 14....	Red triangular daymark on pole, concrete base.	On rock wash, northwesterly of Nell Point. 16 feet high.
Canoe Channel Daybeacon 16....	Black rectangular daymark on pole, concrete base.	On rock northwesterly of Nell Point. 16 feet high.
Rainy Lake Buoy 1.....	Black can (M) White reflector.	North side of channel to Kettle Falls.
Rainy Lake Buoy.....	Red and black can (M).....	Marks rock wash in channel to Kettle Falls.
Rainy Lake Buoy 3.....	Black can (M) White reflector.	North side.
Rainy Lake Buoy 5.....	Black can (M) White reflector.	North side.
Rainy Lake Buoy 6.....	Red nun (M) Red reflector.	South side.
Rainy Lake Buoy 7.....	Black can (M) White reflector.	North side.
Rainy Lake Buoy 8.....	Red nun (M) White reflector.	South side.
Rainy Lake Buoy 10.....	Red nun (M) Red reflector.	South side.
Rainy Lake Buoy 11.....	Red nun (M) Red reflector.	South side.
Rainy Lake Buoy 14.....	Red nun (M) Red reflector.	East side.
Rainy Lake Buoy 15.....	Black can (M) White reflector.	East side.
Rainy Lake Buoy 17.....	Black can (M) White reflector.	North side.
Rainy Lake Buoy 19.....	Black can (M) White reflector.	North side.
Rainy Lake Buoy 21.....	Black can (M) White reflector.	North side.
Rainy Lake Buoy 22.....	Red nun (M) Red reflector.	West side.
Rainy Lake Buoy 24.....	Red nun (M) Red reflector.	West side.
Rainy Lake Buoy 25.....	Black can (M) White reflector.	East side.
Rainy Lake Buoy 26.....	Red nun (M) Red reflector.	West side.
Rainy Lake Buoy 27.....	Black can (M) White reflector.	East side.
Rainy Lake Buoy 28.....	Red nun (M) Red reflector.	West side.
Rainy Lake Buoy 29.....	White reflector.	East side.
Rainy Lake Buoy 30.....	Red nun (M) Red reflector.	West side.
Rainy Lake Buoy 31.....	Black can (M) White reflector.	East side.
Rainy Lake Buoy 33.....	Black can (M) White reflector.	South side.
Rainy Lake Buoy 34.....	Black can (M) White reflector.	South side.

## LAKE MICHIGAN

STRAITS OF MACKINAC		
St. Helena Southeast Shoal Buoy 1.	Black; 3d-cl. spar.....	On southerly side of shoal. In 13 feet.
St. Helena Shoal Buoy SHS.....	White reflector. Red and black horizontal bands; 3d-cl. spar.	On south side of 8-foot shoal. In 19 feet.

## LAKE MICHIGAN

Name; mark on aid	Description	Location—Depth
<b>STRAITS OF MACKINAC</b>		
Manitou Paymen Shoal Buoy 9.....	Red; 3d-cl. spar.....	On southwest point of shoal. In 17 feet.
New Shoal Buoy 8.....	Red reflector. Black; 3d-cl. spar.....	On north edge of New Shoal No. 2. In 27 feet.
New Shoal Buoy 7.....	White reflector. Black; 3d-cl. spar.....	1,300 feet west of New Shoal No. 3. In 43 feet.
White Shoal Buoy.....	White reflector.	On southwest end of shoal. In 17 feet.
Rose Shoal Buoy 5.....	Red and black horizontal bands; 4th-cl. spar. Black; 3d-cl. spar.....	On northwest end of shoal. In 23 feet.
Waagobance Daybeacon.....	White reflector. Conical tower.....	4 1/4 miles 150° from White Shoals Light-house. On northwest point of shoal. In 18 feet.
Virna Shoal Buoy 7.....	Black; 4th-cl. spar.....	White reflector.
Grays Reef East Channel Buoy 1.....	Black; 1st-cl. can; 3d-cl. spar in winter.	At east side of north entrance to channel. In 33 feet.
Grays Reef East Channel Buoy 3.....	White reflector. Black; 2d-cl. can (S); 3d-cl. spar in winter.	On east side of channel. In 28 feet.
Grays Reef East Channel Buoy 4.....	White reflector. Red; 2d-cl. nun (S); 3d-cl. spar in winter.	On west side of channel. In 29 feet.
Grays Reef East Channel Buoy 5.....	Red reflector. Black; 2d-cl. can (S); 3d-cl. spar in winter.	On east side of channel. In 31 feet.
Grays Reef East Channel Buoy 6.....	White reflector. Black; 2d-cl. nun (S); 3d-cl. spar in winter.	On west side of channel. In 27 feet.
Grays Reef East Channel Buoy 9.....	Red reflector. Black; 1st-cl. can; 3d-cl. spar in winter. White reflector.	At east side of south entrance to channel. In 32 feet.
<b>EAST SIDE</b>		
Is Aux Galde East End Buoy 4.....	Red; 3d-cl. spar.....	On east end of shoal. In 20 feet.
Is Aux Galde Buoy 1.....	Red reflector. Black; 3d-cl. spar.....	On northwest end of shoal. In 18 feet.
Dakota Shoal Buoy 1.....	White reflector. Black; 2d-cl. can; 3d-cl. spar in winter.	On southwest end of shoal. In 17 feet.
Hog Island Reef Buoy H1.....	White reflector. Red and black horizontal bands; 3d-cl. spar.....	Off southeast end of reef. In 18 feet.
Beaver Harbor Buoy 4.....	Red; 3d-cl. spar.....	4,000 feet 113° from St. James Light. In 30 feet.
Beaver Harbor Buoy 1.....	Red reflector. Black; 3d-cl. spar.....	5,000 feet 128 1/4° from St. James Light. In 24 feet.
Beaver Harbor Buoy 1.....	Red; 3d-cl. spar.....	In 24 feet.
Richards Reef Buoy 2.....	Red reflector. Red; 3d-cl. spar.....	On westerly side of reef. In 27 feet.
Fisherman Island Shoal Buoy 1.....	Red reflector. Black; 3d-cl. spar.....	On northwest end of shoal. In 20 feet.
<b>GRAND TRAVERSE BAY</b>		
Northport Bay Shoal Buoy 4.....	Red; 3d-cl. spar.....	Marks southeast end of shoal. In 20 feet.
Northport Bay Shoal Buoy 6.....	Red reflector. Red; 3d-cl. spar.....	Marks southwest side of shoal. In 31 feet.
Sutton Point Buoy 1.....	Red reflector. Black; 3d-cl. spar.....	On north end of shoal. In 22 feet.
Tucker Point Buoy 1.....	White reflector. Black; 3d-cl. spar.....	On south end of shoal off point. In 22 feet.
Marion Island North Shoal Buoy 2.....	White reflector. Red; 3d-cl. spar.....	On north end of shoal. In 22 feet.
Marion Island South Shoal Buoy 6.....	Red reflector. Black; 2d-cl. can (S).....	On southwest end of shoal. In 22 feet.
Traverse City Outer Inlake Buoy.....	White reflector. Red and black horizontal bands; 3d-cl. spar.....	In 30 feet. Maintained by Traverse City, Mich.
Traverse City Inner Inlake Buoy.....	Red and black horizontal bands; 3d-cl. spar.....	In 24 feet. Maintained by Traverse City, Mich.
<b>EAST SIDE</b>		
South Fox Island Shoals Buoy 8.....	Black; 3d-cl. spar.....	Marks the south limit of the passage through the South Fox Island Shoals. In 24 feet.
South Fox Island Shoals Buoy 4.....	White reflector. Red; 3d-cl. spar.....	Marks the north limit of the passage through the South Fox Island Shoals. In 20 feet.

## LAKE MICHIGAN

Name; mark on aid	Description	Location—Depth
<b>EAST SIDE</b>		
<i>Pyramid Point Shoal Buoy 5</i> .....	Black; 2d-cl. can; 3d-cl. spar in winter.	On north end of shoal. In 33 feet.
<i>North Manitow Shoal Southwest End Buoy 6</i> .....	White reflector. Red; 2d-cl. nun; 3d-cl. spar in winter.	In 20 feet.
<i>South Manitow Harbor Buoy 4</i> .....	Rod reflector. Red; 3d-cl. spar.	Marks spit extending out from easterly shore of island. In 18 feet.
<i>Manistee Lake Buoy 3</i> .....	Black; 3d-cl. spar.	In 40 feet.
<i>Manistee Lake Buoy 5</i> .....	White reflector. Black; 3d-cl. spar.	In 43 feet.
<i>Manistee Lake Buoy 7</i> .....	Black; 3d-cl. spar.	In 36 feet.
<i>Manistee Lake Buoy 8</i> .....	White reflector. Red; 3d-cl. spar.	In 44 feet.
<i>Pere Marquette Lake Buoy 1</i> .....	Rod reflector. Black; 3d-cl. spar.	In 20 feet.
<i>Pere Marquette Lake Buoy 3</i> .....	White reflector. Black; 3d-cl. spar.	In 16 feet.
<i>Pere Marquette Lake Buoy 6</i> .....	Black; 3d-cl. spar.	In 16 feet.
<i>Anno C. Nitch Buoy M</i> .....	White reflector. Red and black horizontal bands; 4th-cl. spar.	8,400 feet 216° from Freshwater Pierhead Light. In 30 feet.
<b>WHITE LAKE</b>		
<i>Douglas Point Shoal Buoy 3</i> .....	Black; 3d-cl. spar.	In 18 feet.
<i>Middle Ground Buoy 6</i> .....	White reflector. Red; 3d-cl. spar.	Marks northern point of shoal. In 20 feet.
<b>MUSKEGON</b>		
<i>Muskegon North Pier Outer Daybeacon</i> .....	White rectangular day-mark. Flood lighted.	On outer end of pier.
<i>Muskegon North Pier Inner Daybeacon</i> .....	White rectangular day-mark. Flood lighted.	On inner end of North Pier.
<i>Muskegon Waterworks Intake Buoy</i> .....	Red and black horizontal bands; spar.	1 3/4 miles 160° from Muskegon South Breakwater Light. In 40 feet. Maintained by City of Muskegon, Mich.
<b>GRAND HAVEN</b>		
<i>Grand River Buoy 1</i> .....	Black can (M).	In 21 feet.
<i>Grand River Buoy 2</i> .....	White reflector. Red nun (M).	In 21 feet.
<i>Grand River Buoy 3</i> .....	Red reflector. Black can (M).	In 21 feet.
<i>Grand River Buoy 4</i> .....	White reflector. Red nun (M).	In 21 feet.
<i>Grand River Buoy 6</i> .....	Red reflector. Red nun (M).	In 21 feet.
<i>Grand River Buoy 8</i> .....	Red reflector. Red nun (M).	In 21 feet.
<i>Grand River Buoy 10</i> .....	Red reflector. Red nun (M).	In 21 feet.
<i>Grand Rapids Water Intake Crib Buoy</i> .....	Red and black horizontal bands; spar.	0.2 miles 174° from Grand Haven Pierhead Range Front Light. In 10 feet. Maintained by City of Grand Rapids.
<b>LAKE MACATAWA</b>		
<i>Lake Macatawa Buoy 6</i> .....	Black; 3d-cl. spar.	In 21 feet.
<i>Lake Macatawa Buoy 7</i> .....	White reflector. Black; 3d-cl. spar.	In 21 feet.
<i>Lake Macatawa Buoy 9</i> .....	White reflector. Black; 3d-cl. spar.	In 16 feet.
<i>Lake Macatawa Buoy 11</i> .....	White reflector. Black; 3d-cl. spar.	In 19 feet.
<i>Lake Macatawa Buoy 13</i> .....	White reflector. Red; 3d-cl. spar.	In 21 feet.
<i>Lake Macatawa Buoy 15</i> .....	Red reflector. Black; 3d-cl. spar.	In 16 feet.
<i>Lake Macatawa Buoy 17</i> .....	White reflector. Black; 3d-cl. spar.	In 15 feet.
<i>Lake Macatawa Buoy 19</i> .....	White reflector. Black; 3d-cl. spar.	In 20 feet.
<i>Lake Macatawa Buoy 21</i> .....	White reflector. Black; 3d-cl. spar.	In 20 feet.

## LAKE MICHIGAN

Name; mark on aid	Description	Location—Depth
<b>KALAMAZOO RIVER</b>		
<i>Kalamazoo River Buoy 9</i> .....	Red; 4th-cl. spar.	In 16 feet.
<i>Kalamazoo River Buoy 1</i> .....	Red reflector. Red; 4th-cl. spar.	In 16 feet.
<i>Kalamazoo River Buoy 6</i> .....	Rod reflector. Red; 4th-cl. spar.	In 16 feet.
<i>Kalamazoo River Buoy 8</i> .....	Rod reflector. Red; 4th-cl. spar.	In 16 feet.
<i>Kalamazoo River Buoy 10</i> .....	Rod reflector. Red; 4th-cl. spar.	In 16 feet.
<i>Kalamazoo River Buoy 11</i> .....	Rod reflector. Red; 4th-cl. spar.	At entrance to Kalamazoo Lake. In 16 feet.
<b>MICHIGAN CITY</b>		
<i>Michigan City Racing Buoy A</i> .....	White and orange horizontal bands; float marker.	1,200 feet 30° from Michigan City East Pierhead Light. In 24 feet.
<i>Michigan City Racing Buoy B</i> .....	White and orange horizontal bands; float marker.	In 24 feet.
<i>Michigan City Racing Buoy C</i> .....	White and orange horizontal bands; float marker.	In 35 feet.
<i>Michigan City Intake East Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	3,650 feet 85° from Michigan City Breakwater Light. In 20 feet. Maintained by Michigan City.
<i>Michigan City Intake West Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	3,200 feet 65° from Michigan City Breakwater Light. In 34 feet. Maintained by Michigan City.
<i>Trail Creek Wreck Buoy 1</i> .....	Black; 4th-cl. spar.	Northerly of Trail Creek. In 11 feet.
<b>INDIANA HARBOR</b>		
<i>Indiana Harbor Buoy 1</i> .....	Black; 3d-cl. spar.	On east side of entrance to channel. In 30 feet.
<i>Indiana Harbor Buoy 3</i> .....	White reflector. Red; 3d-cl. spar.	On west side of entrance to channel. In 30 feet.
<i>Indiana Harbor Buoy 5</i> .....	Red reflector. Black; 3d-cl. spar.	On east side of channel. In 30 feet.
<i>Indiana Harbor Buoy 7</i> .....	White reflector. Red; 3d-cl. spar.	On west side of channel. In 30 feet.
<i>Indiana Harbor Buoy 9</i> .....	Red reflector. Red; 3d-cl. spar.	On west side of channel. In 20 feet.
<i>Carbide and Carbon Intake Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	9,200 feet 283° from Indiana Harbor West Breakwater. Maintained by Carbide Carbon Corp.
<i>Standard Oil Company Intake Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	8,870 feet 271° from Indiana Harbor East Breakwater Light. Maintained by Standard Oil Company of Indiana.
<i>Lever Brothers Intake Crib Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	2,745 feet 234° from Hammond Intake Crib Light. In 17 feet. Maintained by Lever Brothers Corp.
<b>CALUMET HARBOR</b>		
<i>Calumet Outer Shoal Buoy</i> .....	Red and black horizontal bands; 1st-cl. can.	5.75 miles 61° from Calumet Harbor Breakwater South End Light, to mark a 50-foot shoal. In 30 feet.
<i>Calumet East Shoal Buoy 6</i> .....	Red 2d-cl. spar.	7,500 feet 107° from Calumet Harbor Light. In 33 feet.
<i>Calumet Harbor Buoy 3</i> .....	Red reflector. Black; 3d-cl. spar.	In 27 feet.
<i>Calumet Harbor Buoy 5</i> .....	White reflector. Black; 3d-cl. spar.	In 22 feet.
<i>Calumet Harbor Buoy 7</i> .....	White reflector. Black; 3d-cl. spar.	In 26 feet.
<i>Calumet Harbor Junction Buoy</i> .....	White reflector. Red and black horizontal bands; 3d-cl. spar.	Marks eastern limits of triangular shoal. 2,430 feet 59 1/2° from Calumet Pierhead Light. In 28 feet.
<i>Material Service Wreck Buoy 3</i> .....	Red; 3d-cl. spar.	In 26 feet.
<b>CHICAGO SOUTH SIDE</b>		
<i>Clark Point Buoy 6</i> .....	Red; 3d-cl. spar.	On east side of rocky reef. In 21 feet.
<i>Jackson Park Yacht Club Racing Buoy 1</i> .....	Red reflector. White spar with black top.	5,100 feet 220° from Hyde Park Crib. Maintained by Jackson Park Yacht Club.
<i>Jackson Park Yacht Club Racing Buoy 2</i> .....	White spar with black top.	3,500 feet 082 1/4° from Hyde Park Crib. Maintained by Jackson Park Yacht Club from May 15 to Nov. 1.
<i>Jackson Park Yacht Club Racing Buoy 3</i> .....	White spar with black top.	5,650 feet 202 1/4° from Hyde Park Crib.



## LAKE MICHIGAN

Name; mark on aid	Description	Location—Depth
<b>CHICAGO SOUTH SIDE</b>		
<i>Souls Park Shoal Buoy SP</i> .....	Red and black horizontal bands; 3d-cl. spar.	On south side of shoal. In 23 feet.
<i>Nadson Park Shoal Buoy S</i> .....	Black; 4th-cl. spar. White reflector.	In 16 feet.
<i>Hyde Park Shoal Outside Buoy S</i> .....	Red; 4th-cl. spar. Red reflector.	In 18 feet.
<i>Hyde Park Shoal Inside Buoy I</i> .....	Black; 3d-cl. spar. White reflector.	In 18 feet.
<i>Maryans Reef Inside Buoy S</i> .....	Black; 4th-cl. spar. White reflector.	In 12 feet.
<i>Oakland Shoal Outside Buoy S</i> .....	Red; 3d-cl. spar. Red reflector.	In 26 feet.
<i>Burnham Park Yacht Club Racing Buoy A</i> .....	Black and white horizontal bands; 3d-cl. spar.	5,350 feet 136½° from Burnham Park Harbor Light. In 17 feet. Maintained by Burnham Park Yacht Club, Inc.
<i>Burnham Park Yacht Club Racing Buoy B</i> .....	Black and white horizontal bands; 3d-cl. spar.	7,830 feet 92° from Burnham Park Harbor Light. In 28 feet. Maintained by Burnham Park Yacht Club, Inc.
<i>Columbia Yacht Club Racing Buoy A</i> .....	White and orange horizontal bands; 3d-cl. spar.	1,300 feet 90° from Chicago Breakwater South Light. In 28 feet.
<i>Columbia Yacht Club Racing Buoy B</i> .....	White and orange horizontal bands; 3d-cl. spar.	6,600 feet 85° from Chicago Harbor Outer Breakwater South End Light. In 33 feet.
<i>Columbia Yacht Club Racing Buoy C</i> .....	White and orange horizontal bands; 3d-cl. spar.	7,600 feet 87° from Burnham Park Harbor Light. In 30 feet. Maintained by Columbia Yacht Club, from May 15 to October 15.
<i>Columbia Yacht Club Racing Buoy D</i> .....	White and orange horizontal bands; 3d-cl. spar.	4,100 feet 77° from Four Mile Crib. In 42 feet.
<i>Columbia Yacht Club Racing Buoy E</i> .....	White and orange horizontal bands; 3d-cl. spar.	12,100 feet 131° from Burnham Park Harbor Light. In 32 feet.
<b>CHICAGO HARBOR</b>		
<i>Chicago Harbor Grant Park Shoal Buoy I</i> .....	Black; 3d-cl. spar. White reflector.	2,300 feet 188° from Chicago Harbor Outer Breakwater South End Light. In 24 feet.
<i>Chicago SE Anchorage Buoy</i> .....	White; 4th-cl. spar.	Marking east side of anchorage area D, west of inner breakwater. In 16 feet.
<i>Chicago Intermediate Anchorage Buoy</i> .....	White; 4th-cl. spar.	
<i>Chicago NE Anchorage Buoy</i> .....	White; 3d-cl. spar.	Abreast of Chicago Tunnel Terminal Company. In 19 feet.
<i>North Branch Buoy I</i> .....	Black; spar.	
<i>North Branch Buoy S</i> .....	Black; spar.	Abreast of Chicago Tunnel Terminal Company. In 19 feet.
<i>Columbia Wrack Buoy I</i> .....	Black; 3d-cl. spar.	In North Branch Canal, 120 feet south of Blackhawk Street.
<i>North Anchorage Buoy</i> .....	White; 4th-cl. spar.	Marks northeast corner of Anchorage Area C, south of Chicago Harbor Outer Breakwater. In 20 feet.
<i>Southeast Anchorage Buoy</i> .....	White; 4th-cl. spar.	Marks southeast corner of Anchorage Area C, south of Chicago Harbor Outer Breakwater. In 15 feet.
<i>Southeast Anchorage Buoy</i> .....	White; 4th-cl. spar.	Marks southwest corner of Anchorage Area O, south of Chicago Harbor Outer Breakwater. In 15 feet.
<i>Northwest Anchorage Buoy</i> .....	White; 4th-cl. spar.	Marks northwest corner of Anchorage Area C, south of Chicago Harbor Outer Breakwater. In 15 feet.
<b>CHICAGO—NORTH SIDE</b>		
<i>Lincoln Park Yacht Club Buoy</i> .....	White and orange horizontal bands; spar.	900 feet 36° from Diverry Yacht Harbor Range Front Light. Marks limits of danger area. In 17 feet. Maintained by Harbor Captain, Chicago Park District, Chicago, Ill.
<i>Belmont Rock Shoal Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	Marks 3d-foot shoal. 1,600 feet 67½° from Belmont Yacht Harbor Light.

## LAKE MICHIGAN

Name; mark on aid	Description	Location—Depth
<b>CHICAGO—NORTH SIDE</b>		
<i>Chicago Corinthian Yacht Club Racing Buoy A</i> .....	White and orange bands; spar.	660 feet 150°. In 21 feet.
<i>Chicago Corinthian Yacht Club Racing Buoy B</i> .....	White and orange bands; spar.	2,600 feet 40°. In 21 feet.
<i>Chicago Corinthian Yacht Club Racing Buoy C</i> .....	White and orange bands; spar.	5,300 feet 120°. In 21 feet.
<i>Chicago Corinthian Yacht Club Racing Buoy D</i> .....	White and orange bands; spar.	2,500 feet 200°. In 17 feet.
<b>EVANSTON</b>		
<i>Columbia Canoe Club Racing Buoy A</i> .....	White and orange bands; spar.	300 feet 90° from south end of club house. Maintained by Columbia Canoe Club, Inc., Chicago, from May 28 to Sept. 11.
<i>Columbia Canoe Club Racing Buoy B</i> .....	White and orange bands; spar.	1,760 feet 117° from Buoy A.
<i>Columbia Canoe Club Racing Buoy C</i> .....	White and orange bands; spar.	1,700 feet 63° from Buoy A.
<i>Evanston Waterworks East Intake Strainer Buoy</i> .....	Red and black horizontal bands; 3d-cl. spar.	East of pumping station. In 20 feet.
<i>Evanston Waterworks Inlet Intake Buoy I</i> .....	Black; spar.	Maintained by city of Evanston, Ill. 1,374 feet east of pumping station. In 18 feet. Maintained by city of Evanston, Ill.
<b>WEST SIDE</b>		
<i>Grasspoint Shoal Buoy A</i> .....	Red; 3d-cl. spar. Red reflector.	Marks southeast end of shoal. In 24 feet.
<i>Wilmette Racing Buoy A</i> .....	Orange, black top; spar.	1,600 feet 91° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy B</i> .....	Orange, black top; spar.	5,480 feet 17° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy C</i> .....	Orange, black top; spar.	6,700 feet 66° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy D</i> .....	Orange, black top; spar.	5,800 feet 91° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy E</i> .....	Orange, black top; spar.	6,330 feet 135° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy F</i> .....	Orange, black top; spar.	8,070 feet 17° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy G</i> .....	Orange, black top; spar.	6,400 feet 64° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy H</i> .....	Orange, black top; spar.	6,540 feet 91° from Wilmette Sanitary Channel Entrance Light.
<i>Wilmette Racing Buoy I</i> .....	Orange, black top; spar.	8,520 feet 120° from Wilmette Sanitary Channel Entrance Light.

## LAKE MICHIGAN

Name, mark or aid	Description	Location—Depth
<b>WEST SIDE</b>		
<i>Wilmette Waterworks Outer Inlake Buoy</i>	Red and black horizontal bands; 34-cl. spar.	In 22 feet. Maintained by City of Wilmette.
<i>Wilmette Waterworks Inner Inlake Buoy</i>	Red and black horizontal bands; 34-cl. spar.	In 14 feet.
<i>North Chicago Waterworks Inlake Buoy</i>	Red and black horizontal bands; 34-cl. spar.	About 1 1/4 miles S <sup>W</sup> from Great Lakes East Breakwater Light. In 16 feet. Maintained by City of North Chicago.
<i>North Chicago Waterworks Inner Inlake Buoy</i>	Red and black horizontal bands; spar.	In 13 feet. Maintained by City of North Chicago.
<i>Waukegan Shoals Buoy 1</i>	Black; 4th-cl. spar.	At east end of shoal. In 21 feet.
<i>Waukegan Harbor Obstruction Buoy 1</i>	White reflector.	
<i>Waukegan Harbor Obstruction Buoy 2</i>	Red; 4th-cl. spar.	2,340 feet 285° from Waukegan Harbor Light. In 18 feet.
<i>American Brass Co.'s Inlake Buoy</i>	Red and black horizontal bands; 34-cl. spar.	In 19 feet. Maintained by American Brass Co. from Apr. 15 to Dec. 15.
<i>Simmons Co.'s Inlake Buoy</i>	Red and black horizontal bands; 34-cl. spar.	In 33 feet. Maintained by Simmons Mfg. Co.
<i>Kenosha Waterworks Inlake Buoy</i>	Red and black horizontal bands; 34-cl. spar.	About 2,625 feet (4 1/4) from Kenosha Breakwater Light. In 25 feet. Maintained by City of Kenosha.
<i>Wind Point South Shoals Buoy W.P.</i>	Red and black horizontal bands; 24-cl. can; 34-cl. spar buoy in winter.	Marks shoalest part of shoals. In 20 feet.
<i>Racine Harbor Buoy 1</i>	Black; 34-cl. spar.	
<i>Racine Harbor Buoy 2</i>	White reflector.	
<i>Racine Harbor Buoy 3</i>	Red; 34-cl. spar.	
<i>Racine Harbor Buoy 4</i>	Red reflector.	
<i>Milwaukee Harbor Special Anchorage North Buoy A</i>	White; spar.	1,240 feet 215° from Milwaukee North Entrance Light. In 23 feet.
<i>Milwaukee Harbor Special Anchorage North Buoy B</i>	White; spar.	In 23 feet.
<i>Milwaukee Harbor Special Anchorage North Buoy C</i>	White; spar.	In 17 feet.
<i>Milwaukee Harbor Special Anchorage South Buoy D</i>	White; spar.	578 feet 146° from South Shore Park Breakwater Light. In 20 feet.
<i>Milwaukee Harbor Special Anchorage South Buoy E</i>	White reflector.	In 17 feet.
<i>Milwaukee Harbor Special Anchorage South Buoy F</i>	White; spar.	In 18 feet.
<i>Sheboygan Reef Buoy 1</i>	White reflector.	
<i>Mankosac Shoal Buoy 1</i>	Red; 24-cl. nun; 34-cl. spar in winter.	Off east side of reef. In 34 feet.
<i>Canal Shoal Buoy 1</i>	Red reflector.	
<i>Black; 34-cl. spar</i>		At north end of shoal. In 20 feet.
<i>Black; 34-cl. can; 34-cl. spar in winter</i>		On east side of shoal. In 19 feet.
<i>White reflector.</i>		
<i>Red; 34-cl. spar</i>		In 23 feet.
<i>Red reflector.</i>		
<b>STURGEON BAY</b>		
<i>Sturgeon Bay Canal South Side Daybeacon</i>	White rectangular day-mark on pyramidal structure; flood lighted.	On southwest entrance to canal.
<i>Sturgeon Bay Buoy 9</i>	Black; 34-cl. spar.	In 25 feet.
<i>Sturgeon Bay Buoy 10</i>	White reflector.	In 25 feet.
<i>Sturgeon Bay Buoy 11</i>	Red reflector.	In 25 feet.
<i>Sturgeon Bay Buoy 12</i>	Black; 34-cl. spar.	In 25 feet.
<i>Sturgeon Bay Buoy 13</i>	White reflector.	In 25 feet.
<i>Sturgeon Bay Buoy 14</i>	Red reflector.	In 25 feet.
<i>Sturgeon Bay Buoy 15</i>	Black; 34-cl. spar.	In 25 feet.
<i>Sturgeon Bay Buoy 16</i>	White reflector.	In 25 feet.
<i>Sturgeon Bay Buoy 17</i>	Red reflector.	In 25 feet.
<i>Black; 34-cl. spar</i>		In 25 feet.
<i>White reflector</i>		In 25 feet.
<i>Black; 4th-cl. spar</i>		In 37 feet.
<i>White reflector</i>		In 15 feet.
<i>Black; 4th-cl. spar</i>		In 15 feet.
<i>White reflector</i>		

## LAKE MICHIGAN

Name, mark or aid	Description	Location—Depth
<b>STURGEON BAY</b>		
<i>Sturgeon Bay Buoy 19</i>	Black; 34-cl. spar.	On east side of middle ground. In 25 feet.
<i>White reflector.</i>		
<i>Red; 34-cl. spar</i>		On east edge of channel. In 25 feet.
<i>Red reflector.</i>		
<i>Black; 34-cl. spar</i>		In 21 feet.
<i>White reflector.</i>		
<i>Black; 34-cl. spar</i>		On east side of shoal off entrance to Sauxy's Harbor. In 25 feet.
<i>White reflector.</i>		
<b>WEST SIDE</b>		
<i>Whitefish Point Shoal Buoy 10</i>	Red; 34-cl. spar.	On southeast point of shoal. In 25 feet.
<i>Red reflector.</i>		
<i>Red; 34-cl. spar</i>		North side of entrance to harbor. In 15 feet.
<i>Red reflector.</i>		
<i>Black; 34-cl. spar</i>		South side of entrance to harbor. In 25 feet.
<i>White reflector.</i>		
<i>Black; 4th-cl. spar</i>		South side of entrance to bay. In 14 feet.
<i>White reflector.</i>		
<i>North Bay Entrance South Side Buoy 1</i>	Red; 34-cl. spar.	In 24 feet.
<i>North Bay Entrance North Side Buoy 1</i>	Red reflector.	
<i>Four-Foot Shoal Buoy 3</i>	Red; 34-cl. spar.	On southeast point of shoal off Rowley Bay. In 25 feet.
<i>Red reflector.</i>		
<i>Rowley Bay South Entrance Buoy 2A</i>	Red; 34-cl. spar.	On westerly side of Barkers Reef. In 19 feet.
<i>Spider Reef Buoy 6</i>	Red; 4th-cl. spar.	Off reef south of Spider Island. In 21 feet.
<i>Red reflector.</i>		
<i>Rowley Bay East Entrance Buoy 1</i>	Red; 34-cl. spar.	Off shoal spot. In 19 feet.
<i>Red reflector.</i>		
<i>Rowley Bay East Entrance Buoy 5</i>	Black; 34-cl. spar.	Off shoal southeast of Rogers dock. In 24 feet.
<i>White reflector.</i>		
<i>Outer Shoal Buoy 1</i>	Black; 34-cl. can (W).	On east side of shoal. In 22 feet.
<i>White reflector.</i>		
<i>Nine-Foot Shoal Buoy 3</i>	Black; 34-cl. spar.	On east side of shoal. In 19 feet.
<i>White reflector.</i>		
<i>Detroit Island Passage Buoy 1</i>	Red; 4th-cl. spar.	On southwest side of shoal. In 11 feet.
<i>Red reflector.</i>		
<i>Plum Island Buoy 1</i>	Black; 4th-cl. spar.	On northeast point of shoal extending from island. In 14 feet.
<i>White reflector.</i>		
<i>Red; 34-cl. nun.</i>		East side of channel, Detroit Harbor Channel. In 16 feet.
<i>Red reflector.</i>		
<i>Red; 4th-cl. spar</i>		In 16 feet.
<i>Red reflector.</i>		
<i>Red; 4th-cl. spar</i>		In 16 feet.
<i>Red reflector.</i>		
<i>Red; 4th-cl. spar</i>		In 16 feet.
<i>White reflector.</i>		
<i>Red; 4th-cl. spar</i>		In 16 feet.
<i>Red reflector.</i>		
<i>Red; 4th-cl. spar</i>		In 16 feet.
<i>White reflector.</i>		
<i>Red; 34-cl. nun.</i>		Marks the turning basin at the end of channel in Detroit Harbor.
<i>Red reflector.</i>		
<i>Red; 34-cl. nun.</i>		Marks end of shoal. In 31 feet.
<i>Red reflector.</i>		
<i>Red; 24-cl. nun; 34-cl. spar in winter.</i>		On southwest point of shoals. In 25 feet.
<i>Red reflector.</i>		
<i>Red; 34-cl. spar</i>		Off southwest side of shoal. In 40 feet.
<i>Red reflector.</i>		
<i>Red; 34-cl. spar</i>		On narrow rocky ledge. In 22 feet.
<i>Red reflector.</i>		
<i>Black; 34-cl. spar.</i>		On small shoal 1.1 miles north of island. In 20 feet.
<i>White reflector.</i>		
<b>NORTH END</b>		
<i>Oak Island Buoy 7</i>	Black; 34-cl. spar.	In 22 feet.
<i>White reflector.</i>		
<i>Black; 34-cl. spar.</i>		Marks west side of shoal. In 25 feet.
<i>White reflector.</i>		
<i>Red; 34-cl. spar</i>		On south end of shoal off island. In 17 feet.
<i>Red reflector.</i>		
<i>Black; 34-cl. spar</i>		Marks south end of shoal southeast of island. In 17 feet.
<i>Red reflector.</i>		
<i>Black; 24-cl. can; 34-cl. spar in winter.</i>		On north end of shoal. In 23 feet.
<i>White reflector.</i>		
<i>Squaw Island Shoal Buoy 8</i>	White reflector.	Marks east side of shoal east of island. In 19 feet.
<i>Red; 34-cl. spar</i>		On Squaw Island.
<i>Red reflector.</i>		
<i>Octagonal tower attached to dwelling.</i>		
<i>Squaw Island West Shoal Buoy 5</i>	Black; 34-cl. spar.	Marks west side of shoal. In 22 feet.
<i>White reflector.</i>		

## LAKE MICHIGAN

Name; mark on aid	Description	Location—Depth
<b>NORTH END</b>		
<i>Pellee Red Buoy 1</i> .....	Black; 3d-cl. spar.....	Marks northeast end of reef. In 23 feet.
	White reflector.....	
<i>Little Coquins Inner Reef Buoy 2</i> .....	Red; 3d-cl. spar.....	On west end of reef. In 23 feet.
	Red reflector.....	

## GREEN BAY

Name; mark on aid	Description	Location—Depth
<b>NORTH END</b>		
<i>Fairport Five-Foot Shoal Buoy</i> .....	Red and black horizontal bands; 4th-cl. spar.....	On northeast end of shoal, west of Fairport. In 7 feet.
<i>Big Bay de Noc Shoal Buoy 1</i> .....	Black; 3d-cl. spar.....	Marks south end of shoal making off Indian Point. In 21 feet.
	White reflector.....	In 24 feet.
<i>Nakma Shoal Buoy 3</i> .....	Black; 3d-cl. spar.....	Eastward of Minneapolis Shoal Light. In 30 feet.
	White reflector.....	
<i>Drieco Shoal Buoy 1</i> .....	Black; 2d-cl. can; 3d-cl. spar in winter.....	Marks south end of shoal. In 24 feet.
	White reflector.....	
<i>Corona Shoal Buoy 2</i> .....	Red; 3d-cl. nun (s).....	On south side of shoal, off Point Peninsula. In 20 feet.
	Red reflector.....	
<i>Elven-Foot Shoal Buoy 6</i> .....	Red; 2d-cl. nun; 3d-cl. spar in winter.....	In 22 feet.
	Red reflector.....	
<i>Point Peninsula Shoal Buoy 8</i> .....	Red; 3d-cl. nun.....	Marks shoal area extending northward from Escanaba Light. In 36 feet.
	Red reflector.....	Marks northern extremity of obstruction. In 24 feet.
<i>Sand Point Buoy 9</i> .....	Black; 2d-cl. can (s).....	On north edge of shoal. In 17 feet.
	White reflector.....	
<i>Escanaba Harbor Buoy 1</i> .....	Black; 3d-cl. spar.....	In 18 feet.
	White reflector.....	
<i>Swanders Point Shoal Inside Buoy 7</i> .....	Black; 3d-cl. spar.....	In 18 feet.
	White reflector.....	
<i>Kipling Channel Buoy 8</i> .....	Red; 4th-cl. spar.....	Marks rock. In 13 feet.
	Red reflector.....	
<i>Cedar River Entrance Buoy 1</i> .....	Black; 4th-cl. spar.....	Marks northwest point of shoal. In 18 feet.
	White reflector.....	
<i>Whaleback Shoal West End Buoy 1</i> .....	Black; 3d-cl. spar.....	In 21 feet.
	White reflector.....	
<b>SOUTH END</b>		
<i>Slater Island Buoy 1</i> .....	Black; 3d-cl. spar.....	In 21 feet.
	White reflector.....	
<i>Slater Shoals Buoy 3</i> .....	Black; 3d-cl. spar.....	In 21 feet.
	White reflector.....	
<i>Strawberry Channel Northeast Buoy 1</i> .....	Red; 3d-cl. spar.....	Marks east edge of shoal. In 25 feet.
	Red reflector.....	
<i>Strawberry Islands Buoy 1</i> .....	Black; 2d-cl. can (s).....	Marks southwest side of adjacent shoal. In 32 feet.
	White reflector.....	Marks southeast end of shoal southeast of Chambers Island. In 19 feet.
<i>Hancock Shoal Buoy 8</i> .....	Red; 3d-cl. spar.....	5,900 feet 24° from Menominee Inner Breakwater Light. In 20 feet.
	Red reflector.....	Maintained by M & M Yacht Club & Menominee, Wis.
<i>M &amp; M Yacht Club Racing Buoy A</i> .....	White; tripod, wooden.....	1,000 feet 31¼° from Menominee Inner Breakwater Light. In 20 feet.
<i>M &amp; M Yacht Club Racing Buoy B</i> .....	White; tripod, wooden.....	On the east side of shoal. In 23 feet.
<i>Menominee Shoal Buoy 1A</i> .....	Red; 4th-cl. spar.....	Marks shoal extending off point. In 23 feet.
	Red reflector.....	
<i>Menominee Entrance Buoy 1</i> .....	Black; 3d-cl. spar.....	On south side of shoal. In 20 feet.
	White reflector.....	
<i>Menominee Entrance Buoy 3</i> .....	Red; 3d-cl. spar.....	On east end of shoal south of entrance to Menominee River. In 24 feet.
	Red reflector.....	
<i>Menominee Shoal Buoy 6</i> .....	Red; 3d-cl. nun; 3d-cl. spar in winter.....	6,200 feet 131° from Green Island Light. In 38 feet.
	Red reflector.....	On west end of shoal. In 19 feet.
<i>Green Island Southeast Shoal Buoy 7</i> .....	Black; 4th-cl. spar.....	Marks shoal water north of entrance to bay. In 12 feet.
	White reflector.....	
<i>Little Sturgeon Bay Buoy 2</i> .....	Red; 3d-cl. nun.....	Marks shoal water area to south of entrance to bay. In 12 feet.
	Red reflector.....	
<i>Little Sturgeon Bay Buoy 5</i> .....	Black; 3d-cl. can.....	East of wreck, 4¼ miles 174¼° from Oconto Harbor South Pierhead Light. In 33 feet.
	White reflector.....	
<i>Spiny C. McLaugh Wreck Buoy 1</i> .....	Red; 4th-cl. spar.....	
	Red reflector.....	

## GREEN BAY

Name; mark on aid	Description	Location—Depth
<b>GREEN BAY CITY ENTRANCE</b>		
<i>Green Bay Buoy 1</i> .....	Black; 3d-cl. spar.....	In 22 feet.
	White reflector.....	
<i>Green Bay Buoy 2</i> .....	Red; 3d-cl. spar.....	In 22 feet.
	Red reflector.....	
<i>Green Bay Buoy 3</i> .....	Black; 3d-cl. spar.....	In 22 feet.
	White reflector.....	
<i>Green Bay Buoy 4</i> .....	Red; 3d-cl. spar.....	In 22 feet.
	Red reflector.....	
<i>Green Bay Buoy 5</i> .....	Black; 3d-cl. spar.....	In 22 feet.
	White reflector.....	
<i>Green Bay Buoy 6</i> .....	Red; 4th-cl. spar.....	In 22 feet.
	Red reflector.....	
<i>Green Bay Buoy 7</i> .....	Black; 3d-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 8</i> .....	Red; 4th-cl. spar.....	In 20 feet.
	Red reflector.....	
<i>Green Bay Buoy 10</i> .....	Red; 4th-cl. spar.....	In 20 feet.
	Red reflector.....	
<i>Green Bay Buoy 11</i> .....	Black; 3d-cl. spar.....	In 21 feet.
	White reflector.....	
<i>Green Bay Buoy 12</i> .....	Red; 3d-cl. spar.....	In 21 feet.
	Red reflector.....	
<i>Green Bay Buoy 13</i> .....	Black; 3d-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 14</i> .....	Red; 3d-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 15</i> .....	Black; 3d-cl. spar.....	In 22 feet.
	White reflector.....	
<i>Green Bay Buoy 16</i> .....	Red; 3d-cl. spar.....	In 22 feet.
	Red reflector.....	
<i>Green Bay Buoy 17</i> .....	Black; 3d-cl. spar.....	In 20 feet.
	White reflector.....	
<i>Green Bay Elbow Buoy 18</i> .....	Red; 3d-cl. spar.....	At inner end of cut at elbow. In 24 feet.
	Red reflector.....	
<i>Green Bay Buoy 22</i> .....	Red; 3d-cl. spar.....	In 24 feet.
	Red reflector.....	
<i>Green Bay Buoy 23</i> .....	Black; 3d-cl. spar.....	In 24 feet.
	White reflector.....	
<i>Green Bay Buoy 25</i> .....	Red; 3d-cl. spar.....	At elbow. In 24 feet.
	Red reflector.....	
<i>Green Bay Buoy 26</i> .....	Black; 3d-cl. can (s).....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 30</i> .....	Red; 3d-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 31</i> .....	Black; 3d-cl. spar.....	In 21 feet.
	White reflector.....	
<i>Green Bay Buoy 32</i> .....	Red; 3d-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 33</i> .....	Black; 4th-cl. spar.....	In 24 feet.
	White reflector.....	
<i>Green Bay Buoy 34</i> .....	Red; 4th-cl. spar.....	In 24 feet.
	Red reflector.....	
<i>Green Bay Buoy 35</i> .....	Black; 4th-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 40</i> .....	Red; 4th-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 41</i> .....	Black; 4th-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 42</i> .....	Red; 4th-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 43</i> .....	Black; 4th-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 44</i> .....	Red; 3d-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 45</i> .....	Black; 3d-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 46</i> .....	Red; 3d-cl. spar.....	In 23 feet.
	Red reflector.....	
<i>Green Bay Buoy 49</i> .....	Black; 3d-cl. spar.....	In 23 feet.
	White reflector.....	
<i>Green Bay Buoy 50</i> .....	Red; 3d-cl. spar.....	In 24 feet.
	Red reflector.....	
<i>East River Entrance Buoy</i> .....	Red and black horizontal bands; 3d-cl. can (s).....	Marks shoal at mouth of East River. In 17 feet.

## FOX RIVER

Name; mark on aid	Description	Location—Depth
<b>FOX RIVER</b>		
<b>GREEN BAY CITY TO DEPERE</b>		
<i>Green Bay City Buoy 1</i> .....	Red; 3d-el. spar. Red reflector.	In 22 feet.
<i>Green Bay City Buoy 3</i> .....	Red; 4th-el. spar. Red reflector.	At junction of southwest side of turning barrin and west side of channel. In 22 feet.
<i>Green Bay City Buoy 6</i> .....	Red; 3d-el. spar. Red reflector.	In 23 feet.
<i>Green Bay City Buoy 7</i> .....	Black; 4th-el. spar. White reflector.	At elbow in channel. In 13 feet.
<i>Green Bay City Buoy 10</i> .....	Red; 3d-el. spar. Red reflector.	In 18 feet.
<i>Green Bay City Buoy 14</i> .....	Red; 3d-el. spar. Red reflector.	In 20 feet.
<i>Green Bay City Buoy 14</i> .....	Red; 3d-el. spar. Red reflector.	At elbow in channel. In 18 feet.
<i>Green Bay City Buoy 16</i> .....	Red; 3d-el. spar. Red reflector.	In 21 feet.
<i>Green Bay City Buoy 18</i> .....	Red; 3d-el. spar. Red reflector.	In 23 feet.
<i>Green Bay City Buoy 19</i> .....	Black; 4th-el. spar. White reflector.	At elbow in channel. In 18 feet.
<i>Green Bay City Buoy 22</i> .....	Red; 4th-el. spar. Red reflector.	In 22 feet.
<i>Green Bay City Buoy 24</i> .....	Red; 4th-el. spar. Red reflector.	In 18 feet.
<i>Green Bay City Buoy 27</i> .....	Black; 4th-el. spar. White reflector.	In 18 feet.
<b>DEPERE TO LAKE APPLETON</b>		
<i>Little Rapids Buoy 2</i> .....	Red nun (M). Red reflector.	Below Little Rapids. In 7 feet.
<i>Little Rapids Buoy 3</i> .....	Black can (M). White reflector.	In 6 feet.
<i>Little Rapids Buoy 4</i> .....	Red nun (M). Red reflector.	In 8 feet.
<i>Little Rapids Buoy 5</i> .....	Black can (M). White reflector.	In 10 feet.
<i>Little Rapids Buoy 6</i> .....	Red nun (M). Red reflector.	In 8 feet.
<i>Little Rapids Buoy 8</i> .....	Red nun (M). Red reflector.	In 6 feet.
<i>Wrightstown Buoy 10</i> .....	Red nun (M). Red reflector.	Below Wrightstown. In 7 feet.
<i>Wrightstown Buoy 11</i> .....	Red nun (M). Red reflector.	Below Wrightstown. In 7 feet.
<i>Wrightstown Buoy 14</i> .....	Red nun (M). Red reflector.	Below Wrightstown. In 7 feet.
<i>Wrightstown Buoy 16</i> .....	Red nun (M). Red reflector.	Above Wrightstown. In 7 feet.
<i>Wrightstown Buoy 17</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Rapids Crocks Buoy 19</i> .....	Black; 3d-el. can (s). White reflector.	Below Lock. In 8 feet.
<i>Rapids Crocks Buoy 18</i> .....	Red; 3d-el. nun (s). Red reflector.	Below Lock. In 8 feet.
<i>Rapids Crocks Buoy 21</i> .....	Black; 3d-el. can (s). White reflector.	Below Lock. In 7 feet.
<i>Rapids Crocks Buoy 20</i> .....	Red; nun (M). Red reflector.	Below Lock. In 9 feet.
<i>Kaukauna Buoy 22</i> .....	Red nun (M). Red reflector.	Below Kaukauna. In 7 feet.
<i>Kaukauna Buoy 26</i> .....	Red nun (M). Red reflector.	In 9 feet.
<i>Kaukauna Buoy 28</i> .....	Red nun (M). Red reflector.	In 8 feet.
<i>Cydara Lock Buoy 30</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Sunset Point Buoy 32</i> .....	Red; nun (M). Red reflector.	In 8 feet.
<i>Sunset Point Buoy 34</i> .....	Red; 3d-el. nun (s). Red reflector.	In 7 feet.
<i>Sunset Point Buoy 36</i> .....	Red nun (M). Red reflector.	In 9 feet.
<i>Sunset Point Buoy 38</i> .....	Red nun (M). Red reflector.	In 9 feet.
<i>Sunset Point Buoy 40</i> .....	Red nun (M). Red reflector.	In 9 feet.
<i>Sunset Point Upper Buoy 42</i> .....	Red nun (M). Red reflector.	In 8 feet.
<i>Far Farm Buoy 43</i> .....	Black; 4th-el. spar. White reflector.	Below Appleton. In 6 feet.

## FOX RIVER

Name; mark on aid	Description	Location—Depth
<b>FOX RIVER</b>		
<b>DEPERE TO APPLETON</b>		
<i>Far Farm Buoy 44</i> .....	Black; 4th-el. spar. White reflector.	Below Appleton. In 9 feet.
<i>Far Farm Buoy 45</i> .....	Black; 4th-el. spar. White reflector.	Below Appleton. In 9 feet.
<i>Far Farm Buoy 46</i> .....	Black; 4th-el. spar. White reflector.	In 8 feet.
<b>LOWER APPLETON</b>		
<i>Appleton Buoy 50</i> .....	Red nun (M). Red reflector.	Below Appleton. In 8 feet.
<i>Appleton Buoy 51</i> .....	Red nun (M). Red reflector.	Below Appleton. In 6 feet.
<b>ORIGNON RAPIDS</b>		
<i>Orignon Rapids Buoy 54</i> .....	Red nun (M). Red reflector.	In 6 feet.
<i>Orignon Rapids Buoy 55</i> .....	Black; 3d-el. can (s). White reflector.	In 7 feet.
<i>Orignon Rapids Buoy 56</i> .....	Red; nun (M). Red reflector.	In 7 feet.
<i>Orignon Rapids Buoy 57</i> .....	Black; can (M). White reflector.	In 7 feet.
<i>Orignon Rapids Buoy 59</i> .....	Black; can (M). White reflector.	In 9 feet.
<i>Orignon Rapids Buoy 61</i> .....	Black; 3d-el. can (s). White reflector.	In 8 feet.
<i>Orignon Rapids Buoy 62</i> .....	Red; 3d-el. nun (s). Red reflector.	In 8 feet.
<i>Orignon Rapids Buoy 67</i> .....	Black; can (M). White reflector.	In 8 feet.
<i>Orignon Rapids Buoy 69</i> .....	Black; 3d-el. can (s). White reflector.	In 10 feet.
<i>Orignon Rapids Buoy 68</i> .....	Red; nun (M). Red reflector.	In 9 feet.
<i>Orignon Rapids Buoy 70</i> .....	Red; 3d-el. nun (s). Red reflector.	In 8 feet.
<b>MENASHA</b>		
<i>Menasha Lower Buoy 73</i> .....	Black can (M). White reflector.	At entrance to channel to Menasha Lock, Little Lake Suite des Morts. In 6 feet.
<i>Menasha Lower Buoy 74</i> .....	Red nun (M). Red reflector.	In 6 feet.
<i>Menasha Lower Buoy 75</i> .....	Black can (M). White reflector.	In 6 feet.
<i>Menasha Channel Buoy 76</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 78</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 79</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 80</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 81</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 82</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 83</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 84</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 85</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 86</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 87</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 88</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 89</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 90</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Menasha Channel Buoy 91</i> .....	Black can (M). White reflector.	In 7 feet.
<i>Menasha Channel Buoy 92</i> .....	Red nun (M). Red reflector.	In 7 feet.

## FOX RIVER

Name; mark on aid	Description	Location—Depth
<b>FOX RIVER</b>		
<b>MEMASHA</b>		
<i>Memasha Channel Buoy 30</i> .....	Black can (M).....	In 7 feet.
<i>Memasha Channel Buoy 31</i> .....	White reflector. Red nun (M).....	In 7 feet.
<i>Memasha Channel Upper Buoy 34</i> .....	Red reflector. Black can (M).....	At entrance to Memasha Channel in north-west end of Lake Winnebago. In 7 feet.
<i>Lighthouse Reef Obstruction Buoy L.H.R.</i>	White reflector. Red and black horizontal bands; 34-in. can (S).	At entrance to Memasha channel. In 8 feet.
<b>LAKE WINNEBAGO</b>		
<i>Nemah Channel South Bank Buoy 1</i> .....	Black; 34-in. can (S).....	In 8 feet.
<i>Nemah Channel North Bank Buoy 2</i> .....	White reflector. Red nun (M).....	In 6 feet.
<i>Nemah Channel North Bank Buoy 4</i> .....	Red reflector. Red nun (M).....	In 8 feet.
<i>Nemah Channel South Bank Buoy 5</i> .....	Red reflector. Black; can (M).....	Marks submerged rock mound. In 6 feet.
<i>Nemah Channel South Bank Buoy 6</i> .....	White reflector. Black; 34-in. can (S).....	In 8 feet.
<i>Nemah Channel North Bank Buoy 7</i> .....	White reflector. Red nun (M).....	In 8 feet.
<i>Nemah Channel North Bank Buoy 8</i> .....	Red reflector. Red nun (M).....	In 7 feet.
<i>Nemah-Nodaway Race Course Float D</i> .....	White and orange horizontal bands; floatmarker.	6,700 feet 150' from Kimberley Light. In 9 feet.
<i>Nemah-Nodaway Race Course Float E</i> .....	White and orange horizontal bands; floatmarker.	6,200 feet 108' from Kimberley Light. In 9 feet.
<i>Oakleaf Reef Buoy 4</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Fond du Lac Channel Buoy 3</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Fond du Lac Channel Buoy 4</i> .....	Red nun (M). Red reflector.	In 7 feet.
<i>Fond du Lac Outfall Sewer Buoy 1</i> .....	Black spar.....	Marks bulkhead at end of outfall sewer. In 8 feet. Maintained by City of Fond du Lac.
<i>Columbia Harbor Entrance Buoy 1</i> .....	Black can (M).....	470 feet 225' from Columbia Park Light. In 8 feet.
<i>Columbia Harbor Entrance Buoy 2</i> .....	White reflector. Black can (M).....	480 feet 291' from Columbia Park Light. In 9 feet.
<b>UPPER FOX RIVER</b>		
<i>Upper Fox River Buoy 9</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 4</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 6</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 8</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 10</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 12</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 14</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 16</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Upper Fox River Buoy 18</i> .....	Red nun (M). Red reflector.	In 5 feet.
<b>LAKE WINNECONNE AND LAKE POYGAN</b>		
<i>Oost Island Channel Buoy 4</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Oost Island Elbow Buoy 6</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Oost Island Channel Buoy 8</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Oost Island Channel Buoy 10</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Oost Island Channel Buoy 12</i> .....	Red nun (M). Red reflector.	In 5 feet.
<i>Oost Island Channel Buoy 14</i> .....	Red nun (M). Red reflector.	In 5 feet.

## FOX RIVER

Name; mark on aid	Description	Location—Depth
<b>LAKE WINNECONNE AND LAKE POYGAN</b>		
<i>Oost Island Channel Buoy 16</i> .....	Red nun (M).....	In 5 feet.
<i>Oost Island Channel Buoy 18</i> .....	Red reflector. Red nun (M). Red reflector.	In 5 feet.
<i>Oost Island Channel Buoy 18</i> .....	Black can (M).....	In 5 feet.
<i>Boom Bay Buoy 3</i> .....	White reflector. Black can (M).....	In 5 feet.
<i>Boom Bay Buoy 5</i> .....	White reflector. Black can (M). Black can (M).	In 5 feet.
<i>Boom Cut Buoy 7</i> .....	White reflector. Black can (M).....	In 5 feet.
<i>Boom Cut Buoy 9</i> .....	White reflector. Black can (M). White reflector.	In 5 feet.

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