

APPENDIX E

STORM WARNING DISPLAY STATIONS OF THE UNITED STATES ATLANTIC COAST

EASTPORT, MAINE

*Eastport, Maine

PORLTAND, MAINE

*Machiasport, Maine

*Cross Island LBS (CGS)

†Whitehead LS (CGS)

†Marshall Point LS (CGS)

†Boothbay Harbor, Maine

*Portland CG Depot, Maine (CGS)

†Cape Elizabeth LBS, Maine (CGS)

*Portland Lightship, Maine (CGS)

*South West Harbor, Maine (CGS)

BOSTON, MASSACHUSETTS

†Portsmouth Harbor LS, N.H. (CGS)

†Merrimac River LBS, Mass. (CGS)

†Straitsmouth LBS, Mass. (CGS)

†Ten Pound Island LS, Mass. (CGS)

†Marblehead, Mass.

†Boston, Mass. (Custom House)

*Boston Lightship, Mass. (CGS)

†Fort Revere, Mass.

†Cape Cod LS, Mass. (CGS)

*Nantucket Shoals Lightship, Mass. (CGS)

*Boston Floating LBS, Mass. (CGS)

†Provincetown, Mass.

†Cape Cod Canal LBS, Mass. (CGS)

*Cataumet, Mass.

†Wings Neck Light, Mass.

†Chatham LS, Mass. (CGS)

*Harwichport, Mass.

*Fairhaven, Mass.

*Pollock Rip Lightship, Mass. (CGS)

*Stone Horse Shoal Lightship, Mass. (CGS)

†Nobska Point LS, Mass. (CGS)

†Saunderstown, R.I.

*Hen & Chickens Lightship (CGS)

*Cross Rip Lightship (CGS)

*Brenton Reef Lightship (CGS)

*Vineyard Sound Lightship (CGS)

†Point Judith LBS, R.I. (CGS)

NANTUCKET, MASSACHUSETTS

†Brant Point LS (CGS)

*Edgartown, Mass.

BLOCK ISLAND, RHODE ISLAND

†Block Island, R.I. (CGS)

*Day displays only

† Day and night displays

↔ Warnings posted in public places

† Night displays only

PROVIDENCE, RHODE ISLAND

*Providence, R.I.

*Jamestown, R.I.

†Wickford, R.I.

BRIDGEPORT, CONNECTICUT

†Bridgeport, Conn.

†Fayerweather Yacht Club, Conn. (CGS)

*Stamford, Conn.

*Greenwich, Conn.

NEW HAVEN, CONNECTICUT

†Ft. Trumbull Operating Base (CGS)

†New Haven, Conn.

†Moorings, Conn. (CGS)

*Fishers Island LBS, N.Y. (CGS)

†Fort H.G. Wright, N.Y.

*Saybrook, Conn.

NEW YORK, NEW YORK

*Cornfield Point Lightship (CGS)

*Ditch Plain LBS (CGS)

*Three Mile Harbor

†Oyster Bay, N.Y.

*New Rochelle, N.Y. (New Rochelle Yacht Club)

*New Rochelle, N.Y. (Municipal Boat Club) (CGS)

*New Rochelle, N.Y. (Hugenot Yacht Club)

*Shinnecock LBS (CGS)

†Port Washington, N.Y. (Manhasset Bay Yacht Club)

*Port Washington, N.Y. (Knickerbocker Yacht Club)

*Little Neck, L.I., N.Y.

†Fort Schuyler, N.Y.

*Moriches LBS (CGS)

†New York, N.Y.

†McBurney Boatyard (Brooklyn), N.Y.

†Port Newark, N.J.

*Atlantic Beach LBS (CGS)

*Brooklyn, N.Y.

*Fire Island LBS (CGS)

*Short Beach LBS (CGS)

*Rockaway Point, N.Y.

*Rockaway LBS (CGS)

*East Rockaway, N.Y. (CGS)

†Sandy Hook LBS (CGS)

*Ambrose Channel Lightship (CGS)

NEW YORK, NEW YORK—Continued

- *Scotland Lightship (CGS)
- *Red Bank, N.J.
- *Long Branch, N.J.
- *Shark River LBS (CGS)
- *Riverside Yacht Club
- †Manasquan Inlet LBS (CGS)

ATLANTIC CITY, NEW JERSEY

- *Bay Head, N.J.
- *Barnegat Lightship (CGS)
- *Barnegat LBS (CGS)
- *Bonds LBS (CGS)
- *Atlantic City, N.J. (Tuna Club)
- †Atlantic City LBS (Clam Creek) (CGS)
- *Atlantic City, N.J.
- *Ocean City LBS (CGS)
- *Townsend Inlet LBS (CGS)
- †Cape May Canal, N.J. (CGS)

PHILADELPHIA, PENNSYLVANIA

- †Bivalve, N.J.
- *Five Fathom Lightship (CGS)
- †Delaware Breakwater
- *Overfalls Lightship (CGS)

BALTIMORE, MARYLAND

- †Baltimore, Md. (The Anchorage)
- *Baltimore, Md (Maryland Yacht Club)
- *Sue Island, Md.
- *Gibson Island, Md.
- †Annapolis, Md.
- *St. Michaels, Md.
- †Oxford, Md.
- *Cambridge, Md.
- *Georgetown, Md.
- *Solomons, Md.
- *Crisfield, Md.

NORFOLK, VIRGINIA

- *Winter Quarter Shoals Lightship (CGS)
- †Fort Monroe, Va.
- †Newport News, Va.
- *Chesapeake Lightship, Va. (CGS)
- †Norfolk, Va.
- *U.S. Naval Operating Base (Norfolk), Va.
- *Fort Eustis, Va.
- †Cape Henry, Va.
- †Coinjock, N.C. (CGS)
- †Elizabeth City, N.C.
- **Hertford, N.C.
- †Edenton, N.C.
- *Columbia, N.C.
- †Manteo, N.C.
- †Washington, N.C.
- †Hatteras, N.C.
- *Diamond Shoals Lightship (CGS)

WILMINGTON, NORTH CAROLINA

- **New Bern, N. C.
- †New Bern, N.C. (Trent River Bridge)
- *Morehead City, N.C.
- †Wilmington, N.C.

* Day displays only

† Day and night displays

** Warnings posted in public places

WILMINGTON, NORTH CAROLINA—Continued

- †Southport, N.C.
- *Frying Pan Shoals Lightship (CGS)

CHARLESTON, SOUTH CAROLINA

- *Myrtle Beach, S.C.
- *Briar Cliffe, S.C.
- †Georgetown, S.C.
- †Sullivan's Island LBS (CGS)
- *Charleston, S.C. (Custom House)
- *Charleston, S.C. (CG Depot) (CGS)
- *Savannah Lightship (CGS)

SAVANNAH, GEORGIA

- †Port Royal, S.C.
- *Isle of Hope, Ga.
- †Brunswick, Ga.
- †Thunderbolt, Ga. (CGS)

JACKSONVILLE, FLORIDA

- †Fernandina Beach, Fla.
- †Fulton, Fla.
- *St. Johns Lightship (CGS)
- *Green Cove Springs
- *Ponce de Leon Inlet (CGS)
- **Titusville, Fla.
- *Cedar Keys, Fla.
- *Eau Gallie, Fla.

MIAMI, FLORIDA

- †Ft. Lauderdale (Bahia Mar Yacht Harbor)
- **Vero Beach, Fla.
- *Fort Pierce LBS, Fla. (CGS)
- **Fort Pierce, Fla.
- *Stuart, Fla.
- *West Palm Beach, Fla.
- *Lake Worth Inlet LBS, Fla. (CGS)
- *Port Everglades, Fla.
- †Fort Lauderdale, Fla. (Lauderdale Marina Fuel Dock)
- *Miami, Fla. (Yacht Basin)
- *Miami Beach, Fla. (Beach Boat Slip)
- *Tavernier, Fla.
- *Causeway Terminal (CGS)
- **Belle Glade, Fla.
- **Canal Point, Fla.
- **Clewiston, Fla.
- *Moorehaven, Fla.
- **Okeechobee, Fla.
- **Pahokee, Fla.
- *Fowey Rocks LS, Fla. (CGS)
- *Carysfort Reef LS, Fla. (CGS)
- *Alligator Reef LS, Fla. (CGS)
- Homestead, Fla. (No displays—Relays messages via Park Service Radio)
- *Islamorada, Fla. (CGS)
- *Everglades, Fla.
- *Naples, Fla. (2nd St. S.)
- *Naples, Fla. (12th Ave. & 8th St.)

DAYTONA BEACH, WBAS, FLORIDA

- *Daytona Beach, Fla.

† Night displays only

KEY WEST, FLORIDA

- *Marathon, Fla.
- *Sombrero Key LS, Fla. (CGS)
- *American Shoals LS, Fla. (CGS)
- †Key West, Fla. (Weather Bureau Bldg.)
- *Key West, Fla. (Trumbo Island Signal Tower)
- *Key West, Fla. (Wm. Curry's Sons Bldg.)
- *Key West Fla. (Lumley & Roberts Hdw. Bldg.)
- *Key West, Fla. (L.M.S. Eisner Yacht Basin)
- *Grassy Key, Fla.
- *Key West, Fla. (Submarine Base)

TAMPA, FLORIDA

- *Punta Rassa, Fla.
- †Fort Myers, Fla.
- *Port Boca Grande, Fla.
- †Punta Gorda, Fla.
- *Sarasota, Fla.
- *Bradenton, Fla.
- †St. Petersburg, Fla.
- *Gulfport, Fla.
- *Clearwater, Fla.
- †Tarpon Springs, Fla.

APALACHICOLA, FLORIDA

- †Apalachicola, Fla.

PENSACOLA, FLORIDA

- *St. Marks, Fla.
- †Carrabelle, Fla.
- †Port St. Joe, Fla.
- †Panama City, Fla. (Saint Andrews)
- *Sunnyside Beach, Fla.
- *Valparaiso, Fla.
- *Fort Walton, Fla.
- †Pensacola, Fla.

MOBILE, ALABAMA

- †Southport, Ala.
- *Mobile Point LS (Fort Morgan) (CGS)
- †Mobile, Ala.
- *Bayou La Batre, Ala.
- †Pascagoula, Miss.
- *Pass Christian, Miss.
- †Biloxi, Miss.
- *Gulfport, Miss.
- †Bay St. Louis, Miss.

NEW ORLEANS, LOUISIANA

- †Chef Menteur, La.
- †Pilottown, La.
- *Port Sulphur, La.
- †Industrial Canal Lock
- *New Canal LS (CGS)
- *Burwood, La.
- *Chef Menteur, La. (U.S. Highway 90)
- **Empire, La.
- *Grand Isle LBS (CGS)
- †Morgan City, La.

LAKE CHARLES, LOUISIANA

- **Cameron, La.

* Day displays only

PORT ARTHUR, TEXAS

- †Sabine LBS (CGS)
- *Orange, Texas
- †Port Arthur, Texas

GALVESTON, TEXAS

- †Galveston LBS (CGS)
- *Morgan Point, Texas
- *Texas City, Texas
- †Kemah, Texas
- *Freeport LBS (CGS)
- *Freeport, Texas (Freeport Sulphur Co.)
- †Matagorda, Texas
- †Palacios, Texas
- †Port Lavaca, Texas
- *Port O'Connor LBS (CGS)
- **Seadrift, Texas

HOUSTON, TEXAS

- **Bay City, Texas

FORT WORTH, TEXAS

- *Madill, Okla.
- *Durant, Okla.
- *Denison, Texas
- *Denison Dam, Texas
- *Pottsboro, Texas
- *Sherman, Texas
- *Whitesboro, Texas

CORPUS CHRISTI, TEXAS

- *Rockport, Texas
- *Aransas Pass, Texas
- *Port Aransas LBS (CGS)
- *Corpus Christi, Texas (U. S. Engineer Reservation)
- *Corpus Christi, Texas (T-Head Corpus Christi)
- *Corpus Christi, Texas (Padre Island Causeway)

BROWNSVILLE, TEXAS

- *Port Isabel LBS (CGS)
- **Brownsville, Texas

OKLAHOMA CITY, OKLAHOMA

- *Lake Hefner, Okla.
- Lake Overholser, Okla. (No displays—Lake Ranger Patrol distributes warnings)

GREAT LAKES

BUFFALO, NEW YORK

- †Dunkirk, N.Y.
- †Lackawanna, N.Y.
- †Buffalo Base (CGS)
- †Sodus Point, N.Y.
- †Rochester LBS (CGS)
- †Niagara LBS (CGS)
- †Fort Ontario, N.Y.
- *Clayton, N.Y.
- †Ogdensburg, N.Y.

ERIE, PENNSYLVANIA

- †Erie, Pennsylvania

† Day and night displays
** Warnings posted in public places

† Night displays only

CLEVELAND, OHIO

- †Conneaut, Ohio
- *Ashtabula LBS (CGS)
- *Fairport LBS (CGS)
- *Cleveland, Ohio (Northeast Yacht Club)
- *Cleveland, Ohio (LBS) (CGS)
- *Cleveland, Ohio (Lakeside Yacht Club)
- *Rocky River, Ohio
- †Mentor, Ohio
- †Lorain LBS (CGS)
- *Vermilion, Ohio

SANDUSKY, OHIO

- †Huron, Ohio
- †Sandusky, Ohio (Meigs Street)
- †Sandusky, Ohio (Jackson Street Dock)
- *Sandusky, Ohio (Sandusky Boat Works)
- †Marblehead LBS (CGS)
- *Kelleys Island, Ohio
- *Put-in-Bay, Ohio
- *Catawba Cliffs, Ohio
- *Port Clinton, Ohio

TOLEDO, OHIO

- *Coast Guard Depot (CGS)

DETROIT, MICHIGAN

- *Monroe, Mich.
- *Detroit, Mich.
- †Belle Isle LBS (CGS)
- †Grosse Pointe Farms, Mich.
- *Mount Clemens, Mich.
- †Port Huron, Mich.
- *Port Huron LBS (CGS)
- †Harbor Beach LBS (CGS)
- *Bay City, Mich.

ALPENA, MICHIGAN

- †Tawas LBS (CGS)
- †Oscoda, Mich.
- †Thunder Bay Is. LBS (CGS)
- †Alpena, Mich.
- †Presque Isle LS (CGS)

SAULT STE. MARIE, MICHIGAN

- †Mackinaw City, Mich.
- †Mackinac Island LBS (CGS)
- †Detour, Mich.
- †Whitefish Point LS, (CGS)
- *Grand Marais LBS (CGS)

CHICAGO, ILLINOIS

- †Charlevoix LBS (CGS)
- †Northport, Mich.
- †South Manitou LS (CGS)
- †Frankfort LBS (CGS)
- †Manistee LBS (CGS)
- †Ludington LBS (CGS)
- †Pentwater LBS (CGS)
- †Muskegon LBS (CGS)
- †Grand Haven LBS (CGS)
- *Holland LBS (CGS)
- †South Haven LBS (CGS)

* Day displays only

† Day and night displays
** Warnings posted in public places

CHICAGO, ILLINOIS—Continued

- †St. Joseph LBS (CGS)
- *Michigan City LBS (CGS)
- †South Chicago LBS (CGS)
- †Jackson Park LBS (CGS)

MILWAUKEE, WISCONSIN

- †Waukegan, Ill.
- †Kenosha LBS (CGS)
- †Racine LBS (CGS)
- †Milwaukee, Wis.
- *Port Washington, Wis.
- †Sheboygan LBS (CGS)

GREEN BAY, WISCONSIN

- †Manitowac, Wis.
- †Two Rivers LBS (CGS)
- †Sturgeon Bay, Wis.
- †Green Bay, Wis. (Naval Armory)
- †Green Bay, Wis. (Green Bay Yacht Club)
- †Menominee, Mich.
- †Plum Island LBS (CGS)

ESCANABA, MICHIGAN

- †Escanaba, Mich.

MARQUETTE, MICHIGAN

- †Munising, Mich.
- †Marquette LBS (CGS)
- *Marquette, Mich. (Island Beach)
- †Eagle Harbor LBS (CGS)
- †Portage LBS (CGS)
- *Ontonogan LS (CGS)

DULUTH, MINNESOTA

- *Black River Park, Mich.
- †Ashland, Wis.
- **Bayfield, Wis.
- †Superior, Wis.
- †Duluth, Minn.
- †Two Harbors, Minn.
- †Grand Marais, Minn. (CGS)

PACIFIC COAST

SEATTLE, WASHINGTON

- †Blaine, Wash.
- †Bellingham, Wash.
- †Everett, Wash.
- †Seattle, Wash. (Exchange Bldg.)
- *Seattle, Wash. (Yacht Club)
- †Tacoma, Wash.
- †Port Townsend, Wash.
- †New Dungeness LS (CGS)
- †Port Angeles, Wash.
- †Neah Bay LBS (CGS)
- †Tatoosh Island, Wash.
- *Swiftsure Bank Lightship (CGS)
- *Umatilla Reef Lightship (CGS)
- *Quillayute River LBS (CGS)
- †Destruction Island LS (CGS)

‡ Night displays only

SEATTLE, WASHINGTON—Continued

†Aberdeen, Wash.
 †Grays Harbor LS, (CGS)
 †Willapa Bay Light Sta. (CGS)
 †South Bend, Wash.
 †North Head, Wash.

OLYMPIA, WASHINGTON

†Olympia, Wash.

NORTH HEAD, WASHINGTON

*Ilwaco, Wash.

PORTLAND, OREGON

†Astoria, Oregon
 †Point Adams LBS (CGS)
 *Columbia River Lightship (CGS)
 *Tillamook Bay LBS (CGS)
 *Depoe Bay (Moorings) (CGS)
 †Yaquina Head LS (CGS)
 †Yaquina Bay LBS (CGS)
 †Umpqua River LBS (CGS)
 *North Bend, Oregon
 †Coos Bay, Oregon
 *Coos Bay LBS (CGS)
 †Cape Arago LS (CGS)
 *Coquille River LBS (CGS)
 †Cape Blanco LS (CGS)

EUREKA, CALIFORNIA

†Humbolt Bay LBS (CGS)
 *Eureka, Calif.

* Day displays only

† Day and night displays
 ** Warnings posted in public places

SAN FRANCISCO, CALIFORNIA

†Antioch, Calif.
 †Berkeley, Calif.
 *Blunts Reef Lightship (CGS)
 Fort Bragg, Calif. (Phones locally)
 *San Francisco, Calif. (Marine Exchange
 Lookout)
 †San Francisco, Calif. (Telephone Bldg.)
 *San Francisco (Lightship) (CGS)
 *Palo Alto, Calif.
 *Port San Luis, Calif.
 †Monterey Lifeboat Sta. (CGS)

LOS ANGELES, CALIFORNIA

†Santa Barbara, Calif.
 †Santa Monica, Calif.
 *Redondo Beach, Calif.
 †San Pedro, Calif.
 *Terminal Island, Calif.
 *Wilmington, Calif.
 †Avalon, Calif.
 †Newport Beach, Calif.
 †Port Hueneme, Calif.
 †Long Beach, Calif.

SAN DIEGO, CALIFORNIA

*Point Loma, Calif.
 *Mission Beach, Calif.
 †San Diego, Calif. (Yacht Club)
 *San Diego, Calif. (Naval Air Station)
 †San Diego, Calif. (Municipal Pier #2)
 *Coronado, Calif.

† Night displays only

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SMALL-CRAFT, STORM, WIND-DIRECTION, AND HURRICANE WARNINGS

The visual warnings adopted by the United States Weather Bureau for announcing the approach of storms are given below. The flags referred to are 8 feet square with a 3 foot square center, while the pennants are 8 feet hoist by 15 feet fly; although in some localities flags and pennants of half these dimensions are used.

THE SMALL-CRAFT WARNING.—A RED PENNANT displayed alone indicates that, while the winds may not reach a velocity sufficiently high to justify the display of a regular storm warning, they will interfere with the safe operation of small craft, such as those engaged in fishing, towing, motor boating, and yachting. Small-craft warnings are not displayed at night.

THE STORM WARNING.—A red flag with black center indicates that a storm of marked violence is expected.

PENNANTS.—The pennant displayed with the flag indicates the direction from which the wind is expected to blow.

THE RED PENNANT displayed with the flags indicates easterly winds.

THE WHITE PENNANT displayed with the flags indicates westerly winds.

When the **RED PENNANT** is hoisted above the storm flag, winds are expected from the **NORTHEAST QUADRANT**; when below, from the **SOUTHEAST QUADRANT**.

When the **WHITE PENNANT** is hoisted above the storm flag, winds are expected from the **NORTHWEST QUADRANT**; when below, from the **SOUTHWEST QUADRANT**.

NIGHT WARNINGS.—By night the approach of storms of marked violence is indicated by: Two red lights, one above the other, for winds beginning from the northeast; a single red light for winds beginning from the southeast; a red light above a white light for winds beginning from the southwest; and a white light above a red light for winds beginning from the northwest.

THE HURRICANE WARNING.—Two storm flags (red with black centers), displayed one above the other, are used to announce the expected approach of tropical hurricanes, and also of those extremely severe and dangerous storms which occasionally move across the Lakes and the northern Atlantic coast.

By night two red lights with a white light between indicate the approach of a hurricane or whole gale.

U. S. NAVY AND COAST GUARD COMMUNICATION SERVICE

All U. S. Navy and Coast Guard radio stations communicate in the strict accordance with the provisions of the current International Telecommunication and Radio Conferences.

Details of services available to shipping by these stations are given in Hydrographic Office Publications No. 205, *Radio Navigational Aids* and Hydrographic Office Publication No. 206, *Radio Weather Aids*.

An article listing the U. S. Navy and Coast Guard coastal radio stations that guard the international calling and distress frequency is revised at frequent intervals and published in H. O. Pub. 205, *Radio Navigational Aids*. Those stations are available to shipping for the receipt of certain messages containing information pertaining to the safety of navigation. The article contains instructions regarding the making of radio reports on ice, derelicts, wreckage, mines, weather, defects in aids to navigation, etc., by shipmasters in conformance with provisions of the Convention for the Safety of Life at Sea.

A table containing the broadcast schedules of the U. S. Navy and Coast Guard radio stations that transmit Mercast, Hydrographic Data, Weather, Ice Reports, and Time Signals is revised quarterly and published as Appendix "B" to H. O. Pub. 205.

PROMULGATION OF URGENT NAVIGATIONAL INFORMATION

Subsequent to their dissemination by radio on broadcast schedules of appropriate radio stations, the Hydrographic Office publishes the text of all numbered Hydrolants, Hydropacs, Naveams and Special Warnings in its *Daily Memorandum* and weekly *Notice to Mariners* (Part I). Those periodicals can be obtained at Branch Hydrographic Offices.

Items of local interest concerning dangers to navigation, defects in aids to navigation notices to shipping, etc., located in pilotage waters, are broadcast only by the U. S. Coast Guard radio station located in the C. G. District affected.

WEATHER CODES

The following codes are used by the U. S. Weather Bureau in transmission of meteorological observations:

The Synoptic Code is used in transmitting six-hourly observations from meteorological stations in the United States, Canada, Alaska, West Indies, and elsewhere. Land station observations contained in international synoptic and marine broadcasts are in this code.

The International Code for Radio Weather Reports from ships, is used in transmitting observations by radio from ships in the North Atlantic Ocean, Caribbean Sea, Gulf of Mexico, and the North Pacific Ocean. Ship's weather reports broadcast for the benefit of marine interest are in this code.

The Codes used in collecting and broadcasting upper-air data are as follows:

1. Upper Wind Code
2. Radiosonde and Rawinsonde Code.

Inquiries regarding any of these codes should be addressed to "Chief, U. S. Weather Bureau, Washington 25, D. C."

HYDROGRAPHIC OFFICE AND RELATED PUBLICATIONS

Radio Navigational Aids (H.O. Pub. No. 205), contains a complete list of the radio stations of all countries that perform services of value to navigation, giving detailed and general information concerning these services, and present the various national regulations bearing on this subject. Among the services are: direction-finder stations, radiobeacons, time signals, navigational warnings, distress signals, medical advice, quarantine report stations, loran, consol, and radio regulations for territorial waters. Detailed information concerning the services rendered by Ocean Station Vessels in the North Atlantic and North Pacific Oceans is contained therein. Appendix "A" to H. O. Pub. No. 205, Emergency Procedures and Communication Instructions for U. S. Merchant Ships, contains information regarding peacetime communication facilities and emergency procedures which are available to merchant ships.

Radio Weather Aids (H.O. Pub. No. 206), Volumes I and II, contains a complete list of stations broadcasting weather data and includes general weather information, broadcast schedules, international index numbers with locations of stations, key groups and call signs.

Daily Memorandum (East Coast Edition), is prepared in the main office and mailed to the East Coast Branch Hydrographic Offices, where it is available for local issue. This publication gives the latest intelligence on dangers to navigation affecting shipping off the coasts and along the principal ocean routes. The more urgent of these items are broadcast by radio as numbered Special Warnings, Hydrolants, Hydropacs and Naveams. It also contains advance information of the more important material that will appear in the Notice to Mariners. A West Coast edition of this publication is issued by the Branch Hydrographic Office, San Francisco, a Pacific edition by the Branch Hydrographic Office, Honolulu, a Far East Edition by the Branch Office at Yokosuka, Japan, and a Canal Zone Edition by Branch Hydrographic Office, Coco Solo, C. Z.

Ice Chartlets. Shipmasters bound for European ports, via the region of the Grand Banks of Newfoundland, can obtain from East Coast Branch Hydrographic Offices daily or weekly chartlets showing graphically the latest ice conditions.

Notice to Mariners, weekly, Parts I and II, publicizes changes in aids to navigation throughout the world; describes newly-reported dangers such as rocks and shoals; records important new soundings; gives notice of official regulations affecting navigation. It is the official publication for the correction of charts, sailing directions, light lists, and other publications of the Hydrographic Office. There are two editions of the Notice to Mariners, Part I (Western Hemisphere) for vessels navigating the coasts and waterways of North and South America and Part II (Eastern Hemisphere) for trans-oceanic shipping. Part I also contains information of timely and general interest to mariners. This includes a summary of the reports on obstructions, drifting mines, and other dangers to navigation, as received by the office, as well as items of value to the navigator relative to navigation, oceanography, and scientific phenomena. The text of all numbered Special Warnings (issued and remaining in force), Hydropacs, Hydrolants, and Naveams are published therein.

Sailing Directions, (sometimes called "Pilots") consist of over 60 volumes, each of which describes a definite area and is identified by a publication number and title. These volumes contain descriptions of coast lines, harbors, dangers, aids, winds, currents, tides, directions for navigating narrow waters and for approaching and entering harbors, port facilities, signal systems, pilotage service and other data that cannot be conveniently shown on the charts. The coasts of the United States and its possessions are described in the Coast Pilots, published by the United States Coast and Geodetic Survey.

Light Lists, give detailed descriptions of navigational lights and fog signals, and include signals of various kinds operated at lighthouses. Lists for foreign waters are published by the Hydrographic Office in six loose-leaf volumes. They are corrected by the weekly Notice to Mariners and maintained by the quarterly issuance of additional or replacement pages.

Light Lists for the United States and its possessions are published by the United States Coast Guard.

Standard Time Zone Chart of the World (H. O. Chart No. 5192), shows the numbered and lettered zones for keeping standard time at sea and the legal or standard time of the various countries of the world. The number of a zone prefixed by a plus or minus sign constitutes the "zone description" of the time of that zone. Also, the corresponding letters which are used as a suffix on date-time-groups to indicate time of a particular zone are shown.

INSTRUCTIONS TO MARINERS IN CASE OF SHIPWRECK, AS PUBLISHED BY THE UNITED STATES COAST GUARD

GENERAL INFORMATION

Coast Guard Lifeboat Stations are located upon the Atlantic and Pacific seabards of the United States, the Gulf of Mexico, and the Lake coasts.

Active stations are manned throughout the year by crews of experienced surfmen.

All active Lifeboat Stations are fully supplied with boats, line-throwing guns, beach apparatus, restoratives, and clothing for the shipwrecked requiring it, etc. In addition to the active stations, there are some listed as inactive stations and some operating in a limited capacity manned by a reduced complement. When additional personnel is needed to operate the equipment at these stations, the men are obtained from adjacent units.

Lifeboat Stations, supplied with boats and other rescue equipment, maintain patrols along the coast after storms or when conditions necessitate a patrol, with a view of ascertaining if any shipwreck has occurred and finding and succoring any persons that may have been cast ashore.

Coast Guard stations are provided with the International Code of Signals, and other means of visual signaling, and vessels can, by opening communication, be reported; or obtain the latitude or longitude of the station; or information as to the weather probabilities in most cases; or, where facilities for the transmission of messages by telephone or telegraph are available, request for a tug or Coast Guard Cutter will be received and promptly forwarded.

All services are performed in accordance with statutory authority by the Coast Guard crews without other compensation than their pay from the Government.

Destitute seafarers are provided with food and lodging at the nearest station by the Government as long as necessarily detained by the circumstances of shipwreck, and, if needed, with clothing.

The station crews patrol the beach where conditions warrant on each side of their stations between sunset and sunrise, and if the weather is foggy the patrol is continued through the day. A continuous lookout is also maintained at every station night and day.

Each patrolman carries warning flares. Upon discovering a vessel standing into danger, he displays one of these to warn her off, or, should the vessel be ashore, to let her crew know that they are discovered and assistance is at hand.

If the vessel is not discovered by the patrol immediately after striking, rockets, or flare-up lights, other recognized signals of distress should be used. If the weather be foggy, some recognized sound signal should be made to attract attention, as the patrolman may be some distance away at the other end of his beat.

Masters are particularly cautioned, if they should be driven ashore anywhere in the neighborhood of the stations, to remain on board until assistance arrives, and under no circumstances should they attempt to land through the surf in their own boats until the last hope of assistance from the shore has vanished. Often when comparatively smooth at sea a dangerous surf is running which is not perceptible 400 yards offshore, and the surf when viewed from a vessel never appears as dangerous as it is. Many lives have been lost unnecessarily by the crews of stranded vessels being thus deceived and attempting to land in the ship's boats.

The difficulties of rescue by operations from the shore are greatly increased in cases where the anchors are let go after entering the breakers, as is frequently done, and the chances of saving life correspondingly lessened.

RESCUE WITH THE LIFEBOAT OR SURFBOAT

The patrolman after discovering your vessel ashore and burning a warning signal, hastens to his station or the telephone for assistance. If the use of a boat is practicable, either the large lifeboat is launched from its ways in the station and proceeds to the wreck by water, or the lighter surfboat is hauled overland to a point opposite the wreck and launched, as circumstances may require.

Upon the boat reaching your vessel the directions and orders of the officer in charge (who always commands and steers the boat) should be implicitly obeyed. Any headlong rushing and crowding should be prevented, and the captain of the vessel should remain on board, to preserve order, until every other person has left.

Women, children, helpless persons, and passengers should be passed into the boat first.

Goods or baggage will positively not be taken into the boat until all are landed. If any be passed in against the remonstrance of the officer in charge, he is fully authorized to throw the same overboard.

RESCUE WITH THE BREECHES BUOY

Should it be inexpedient to use either the lifeboat or surfboat, recourse will be had to the wreck gun and beach apparatus for the rescue by the breeches buoy.

A shot with a small line attached will be fired across your vessel. Get hold of the line as soon as possible and haul on board until you can get a tailblock with a whip or endless line rove through it. The tail block should be hauled on board as quickly as possible to prevent the whip drifting off with the set or fouling with wreckage, etc. Therefore, if you have been driven into the rigging, where but 1 or 2 men can work to advantage, cut the shot line and run it through some available block, such as the throat or peak-halyards block, or any block which will afford a clear lead, or even between the ratlines, that as many as possible may assist in hauling.

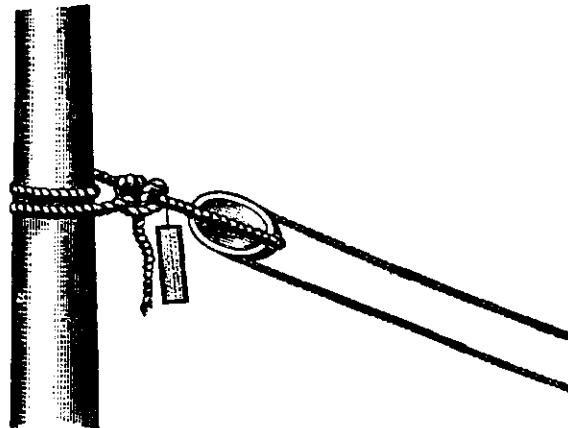


FIGURE I.

Attached to the tail block will be a tally board with the following directions in English on one side and French on the other:

Make the tail of the block fast to the lower mast, well up. If the masts are gone, then to the best place you can find. Cast off shot line, see that the rope in the block runs free, and show signal to the shore.

The above instruction being complied with, the result will be as shown in Figure 1.

As soon as your signal is seen a 3-inch hawser will be bent onto the whip and hauled off to your ship by the lifesaving crew.

If circumstances permit, you can assist the lifesaving crew by manning that part of the whip to which the hawser is bent and hauling with them.

When the end of the hawser is got on board, a tally board will be found attached, bearing the following directions in English on one side and French on the other:

Make this hawser fast about 2 feet above the tailblock, see all clear and that the rope in the block runs free, and show signal to the shore.

These instructions being obeyed, the result will be as shown in Figure 2.

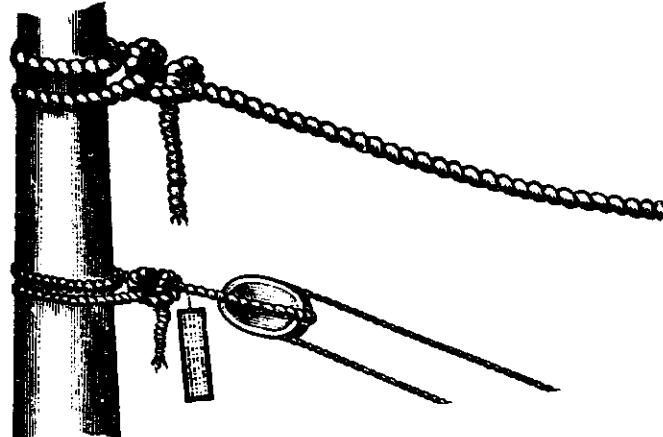


FIGURE II.

Take particular care that there are no turns of the whip line round the hawser. To prevent this, take the end of the hawser up between the parts of the whip before making it fast.

When the hawser is made fast, the whip cast off from the hawser, and your signal seen by the lifesaving crew, they will haul the hawser taut and by means of the whip will haul off to your vessel a breeches buoy suspended from a traveler block.

Figure 3, below, represents the apparatus rigged, with the breeches buoy hauled off to the ship.

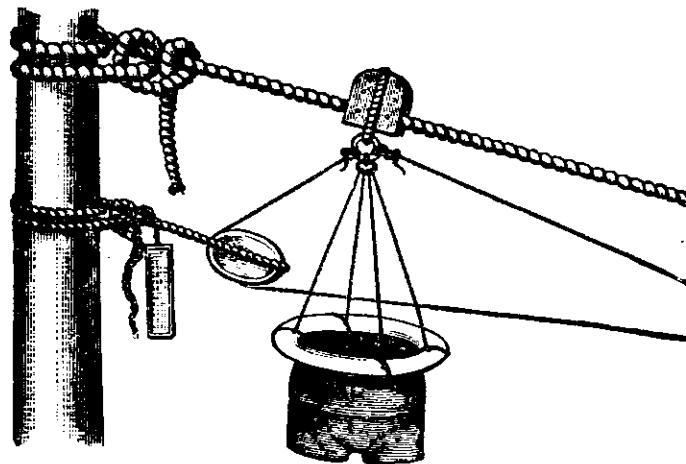


FIGURE III.

If the breeches buoy be sent, let one man immediately get into it, thrusting his legs through the breeches. Signal as before, and the buoy will be hauled ashore. This will be repeated until all are landed.

In many instances two men can be landed in the breeches buoy at the same time by each putting a leg through a leg of the breeches and holding onto the lifts of the buoy. This, however, should not be attempted except in an extreme emergency.

Children when brought ashore by the buoy, should be in the arms of older persons or securely lashed to the buoy. Women and children should be landed first.

In signaling as directed in the foregoing instructions, if in the daytime, let one man separate himself from the rest and swing his hat, a handkerchief, or his hand; if at night, the showing of a light and concealing it once or twice will be understood; and like signals will be made from the shore. (See also "Life-Saving Signals", below.)

Circumstances may arise, owing to the strength of the current or set or the danger of the wreck breaking up immediately, when it would be impossible to send off the hawser. In such a case a breeches buoy will be hauled off instead by the whip or sent off to you by the shot line, and you will be hauled ashore through the surf.

If your vessel is stranded during the night and discovered by the patrolman—which you will know by his burning a brilliant light—keep a sharp lookout for signs of the arrival of the lifesaving crew abreast of your vessel.

Some time may intervene between the burning of the light and their arrival, as the patrolman may have to return to his station, perhaps 3 or 4 miles distant, and the lifesaving crew draw the apparatus or surfboat through the sand or over bad roads to where your vessel is stranded.

Lights on the beach will indicate their arrival, and the sound of cannon firing from the shore may be taken as evidence that a line has been fired across your vessel. Therefore upon hearing the cannon, make strict search aloft, fore and aft, for the shot line, for it is almost certain to be there. Though the movement of the lifesaving crew may not be perceptible to you, owing to the darkness, your vessel will be a good mark for the men experienced in the use of the wreck gun.

IMPORTANT

Remain by the wreck until assistance arrives from the shore, or as long as possible. If driven aloft, the inshore mast is the safest.

If not discovered immediately by the patrol, burn rockets, flare-up, or other lights, or if the weather be foggy, fire guns or make other signals.

Make the shot line fast on deck or to the rigging to prevent its being washed into the sea and possibly fouling the gear.

Take particular care that there are no turns of the whip line around the hawser before making the hawser fast.

Send the women, children, helpless persons, and passengers, ashore first.

Make yourself thoroughly familiar with these instructions, and remember that on your coolness and strict attention to them will greatly depend the chances of success in bringing you and your people safely to land.

LIFE-SAVING SIGNALS

(International Conference for Safety of Life at Sea, London, 1948.)

The following signals shall be used by life-saving stations when communicating with ships in distress and by ships in distress when communicating with life-saving stations:

(a) *Replies from shore station to distress signals made by a ship:*

<i>Signal</i>	<i>Signification</i>
By day—White smoke signal.	"You are seen assistance will be given as soon as possible."
By night—White star rocket.	

(b) *Landing signals for the guidance of small boats bringing away the crew of a wrecked ship:*

<i>Signal</i>	<i>Signification</i>
By day—Vertical motion of a white flag or the arms.	
By night—Vertical motion of a white light or flare. A range (indication of direction) may be given by placing a steady white light or flare lower and in line with the observer.	“This is the best place to land.”
By day—Horizontal motion of a white flag or arms extended horizontally.	
By night—Horizontal motion of a white light or flare.	“Landing here highly dangerous.”
By day—Horizontal motion of a white flag, followed by the placing of the white flag in the ground and the carrying of another white flag in the direction to be indicated.	
By night—Horizontal motion of a white light or flare, followed by the placing of the white light or flare on the ground and the carrying of another white light or flare in the direction to be indicated.	“Landing here highly dangerous. A more favorable location to land is in the direction indicated.”

(c) *Signals to be employed in connection with the use of shore life-saving apparatus:*

<i>Signal</i>	<i>Signification</i>
By day—Vertical motion of a white flag or the arms.	In general—“Affirmative.”
By night—Vertical motion of a white light or flare.	Specifically: “Rocket line is held.” “Tail block is made fast.” “Hawser is made fast.” “Man is in the breeches buoy.” “Haul away.”
By day—Horizontal motion of a white flag or arms extended horizontally.	In general—“Negative.”
By night—Horizontal motion of a white light or flare.	Specifically: “Slack away.” “Avast hauling.”

COAST GUARD DISTRICTS AND COASTAL LIFEBOAT STATIONS IN THE UNITED STATES

FIRST COAST GUARD DISTRICT

COASTS OF MAINE, NEW HAMPSHIRE, MASSACHUSETTS, AND RHODE ISLAND

Name of station	State	Location	Aerial Identification Numbers
Quoddy Head.....	Maine.....	Near West Quoddy Head Light.....	1
Cross Island.....	do.....	On northeast end of Cross Island opposite Mink Island, off Machiasport, Me.....	2
Moose Peak.....	do.....	On east point of Mistake Island, site of Moose Peak Light.....	4
Whithead.....	do.....	Whitehead Island, $\frac{1}{4}$ mile west of Whitehead Light.....	6
Burnt Island.....	do.....	North side of Burnt Island, off mouth of St. George River.....	7
Damariscotta Island.....	do.....	Damariscotta Island; west side of Damariscotta Harbor.....	8
Kennebec River.....	do.....	West side of mouth of Kennebec River.....	9
Cape Elizabeth.....	do.....	On Dyer's Cove, Cape Elizabeth near Cape Elizabeth Light.....	10
Fletchers Neck.....	do.....	Biddeford Pool, Fletchers Neck.....	11
Portsmouth Harbor.....	New Hampshire.....	On New Castle Is., Portsmouth Harbor.....	12
Hampton Beach.....	do.....	Hampton Beach $1\frac{1}{4}$ miles north of Great Boars Head.....	16
Merrimac River.....	Massachusetts.....	North end of Plum Island, east of Newburyport Light, south side of mouth of Merrimac River.....	20
Straitsmouth.....	do.....	On Cape Ann, $\frac{1}{4}$ mile of Straitsmouth Light.....	23
Gloucester.....	do.....	Old House Cove, westerly side of Gloucester Harbor.....	28
Nahant.....	do.....	On the neck, close to Nahant.....	24
Boston.....	do.....	Being relocated on southern end of Castle Island, near Fort Independence.....	25
Point Allerton.....	do.....	1 mile west of Point Allerton.....	26
Selcute.....	do.....	On Southern shore of Scituate Harbor, $\frac{1}{4}$ mile SW of Cedar Point Light.....	30
Gurnet.....	do.....	Lower end of Duxbury Beach, $4\frac{1}{4}$ miles northeast of Plymouth, Mass.....	30
Cape Cod Canal.....	Massachusetts.....	Eastern entrance of Cape Cod Canal.....	32
Race Point.....	do.....	$1\frac{1}{4}$ miles Northeast of Race Point Light, Cape Cod.....	34
Nauset Beach.....	do.....	$1\frac{1}{4}$ miles South of Nauset Beach Light.....	39
Chatham.....	do.....	Southeastern Cape Cod, at Chatham Light.....	42
Brant Point.....	do.....	On west side of entrance to Nantucket Harbor, near Brant Point Light.....	47
Gay Head.....	do.....	On Martha's Vineyard, west end, near Gay Head Light.....	49
Cuttyhunk.....	do.....	On Cuttyhunk Island, near east end, abreast Cuttyhunk Harbor.....	50
Castle Hill.....	Rhode Island.....	On west shore, Newport Neck, near Castle Hill Light, east side of entrance to Narragansett Bay.....	53
Point Judith.....	do.....	On Point Judith, near Point Judith Light, $\frac{1}{4}$ mile east of Point Judith Harbor of Refuge.....	55
Block Island.....	do.....	On Block Island, west side, near Dickens Point.....	62

SECOND COAST GUARD DISTRICT

Name of station	State	Location	Aerial Identification Numbers
Louisville.....	Kentucky.....	At Louisville, above falls of the Ohio River; this is a floating station.....	276

THIRD COAST GUARD DISTRICT

COASTS OF CONNECTICUT, NEW YORK, NEW JERSEY, PENNSYLVANIA AND DELAWARE,
INCLUDING FENWICK ISLAND

Name of station	State	Location	Aerial Identification Numbers
Fishers Island.....	New York.....	North side of Fishers Island, west shore of East Harbor, 4 miles west by south of Watch Hill Light (relocation to southern end of island planned 1958)	59
Eatons Neck.....	do.....	On Eatons Neck, near light, north shore Long Island, east side entrance Huntington Bay.	64
Ditch Plain.....	do.....	Abreast of Great Pond, 3½ miles southwest of Montauk Point Light (relocation to Montauk Harbor planned 1958)	65
Shinnecock.....	do.....	East side of Ponquogue Point, 1½ miles northwest of Shinnecock Inlet 43 Light.	72
Moriches.....	do.....	2½ miles Southwest of Speonk Point, east side entrance to Tuthill Cave.	76
Fire Island.....	do.....	Near west end of Fire Island 2½ miles west of Fire Island Light.	83
Short Beach.....	do.....	1½ miles East of Jones Inlet, opposite Meadow Island.	88
Atlantic Beach.....	do.....	North side Atlantic Beach, ¼ mile northeast of breakwater.	90
Rockaway.....	do.....	On Rockaway Beach, 2½ miles east of Rockaway Point.	92
Sandy Hook.....	New Jersey.....	On bay side, ½ mile south of point of Sandy Hook.	97
Monmouth Beach.....	do.....	At Galilee, about 1 mile south of Sea Bright, New Jersey.	100
Shark River.....	do.....	North side, ½ mile north of entrance Shark River Inlet at Avon.	108
Manasquan Inlet.....	New Jersey.....	East side of Cooks Creek, ½ mile west of inlet entrance.	105
Toms River.....	do.....	On Island Beach abreast mouth of Toms River.	109
Barnegat.....	do.....	On Long Beach at Barnegat City, ½ mile south-southeast of old light tower.	118
Bonds.....	do.....	On Long Beach 2½ mile southwest of Beach Haven and ½ mile north of inlet.	118
Little Egg.....	do.....	Abreast of Little Egg Inlet, ¼ mile southeast by east of Tuckerton Radio Tower Aerobeacon.	119
Atlantic City.....	do.....	North side mouth of Clam Creek opposite Gardiner Basin, near mouth Absecon Inlet.	123
Ocean City.....	do.....	At Ocean City opposite Anchorage Point, ½ mile southwest of Great Egg Inlet.	126
Corson Inlet.....	do.....	On Ludlam Beach at Strathmere, 3 miles northeast by north of Ludlam Beach Light.	128
Townsend Inlet.....	do.....	North side of Townsend Inlet, 2½ miles southwest of Ludlam Beach Light.	130
Hereford Inlet.....	do.....	On Four Mile Beach at the Hereford Inlet Light, just south of Hereford Inlet.	133
Cape May.....	do.....	North side of Delaware Bay entrance to Cape May Canal.	137
Lewes.....	Delaware.....	On breakwater Harbor, 2 miles west of Cape Henlopen Light.	139
Indian River Inlet.....	do.....	2 miles North of Indian River Inlet.	142

FIFTH COAST GUARD DISTRICT

COASTS OF MARYLAND, VIRGINIA AND NORTH CAROLINA

Name of station	State	Location	Aerial Identification Numbers
Ocean City.....	Maryland.....	At Ocean City, ¼ mile southwest of Great Egg Inlet.	146
Popes Island.....	Virginia.....	Northeast 9¾ miles of Assateague Light.	149
Assateague Beach.....	do.....	On Fishing Point, Assateague Anchorage 3½ miles south-southwest of Assateague Light.	150
Metomkin Inlet.....	do.....	North end Cedar Island, south side Metomkin Inlet.	152
Parramore Beach.....	do.....	On Parramore Island, ½ mile south of Wachapreague Inlet, 7 miles north-northeast of Little Machipongo Inlet.	154
Little Machipongo Inlet.....	do.....	Inside at the north end of Hog Island about ½ mile south of Little Machipongo Inlet.	155
Cobb Island.....	do.....	Near south end Cobb Island, 4½ miles southwest of Great Machipongo Inlet.	157
Little Creek.....	do.....	1 mile south of entrance to Little Creek 4½ miles west Lynnhaven Inlet.	161
Virginia Beach.....	do.....	South 5½ miles of Cape Henry Light at Virginia Beach.	162
Little Island.....	do.....	On beach abreast of North Bay.	164
Caffreys Inlet.....	North Carolina.....	On beach about 11 miles south of Currituck Beach Light.	170
Kill Devil Hills.....	do.....	On beach abreast south end Collington Island and south-southeast 1½ miles of Kill Devil Hills.	173
Nags Head.....	do.....	Beach front at Nags Head, 8½ miles north of Bodie Island Light.	174

FIFTH COAST GUARD DISTRICT—Continued

COASTS OF MARYLAND, VIRGINIA, AND NORTH CAROLINA—Continued

Name of station	State	Location	Aerial Identification Numbers
Oregon Inlet.....	North Carolina.....	Near northern end of Pea Island, 1½ miles south of Oregon Inlet.....	176
Chicamacomico.....	do.....	Beach, ½ mile south of New Inlet.....	179
Little Kinnakset.....	do.....	On beach 10½ miles north of Cape Hatteras Light and about 4 miles south of Gull Island.	181
Cape Hatteras.....	do.....	At Cape Hatteras, 1 mile south of Cape Hatteras Light.....	183
Hatteras Inlet.....	do.....	On Ocracoke Island, about 1 mile west of Hatteras Inlet.....	186
Ocracoke.....	do.....	At Ocracoke about ½ mile north of light and 3½ miles NNE of Ocracoke Inlet.	187
Atlantic.....	do.....	On Core Bank opposite Hunting Quarter, about 2 miles southwest of Drum Inlet and halfway between Ocracoke Inlet and Cape Lookout.	189
Cape Lookout.....	do.....	1½ miles south of Cape Lookout Light.....	190
Fort Macon.....	do.....	East end of Bogue Banks on Beaufort Entrance, ¼ mile northwest of Fort Macon, 10½ miles northwest of Cape Lookout.	191
Swansboro.....	do.....	½ mile east of Bogue Inlet on west end of Bogue Banks.....	192
Oak Island.....	do.....	West side mouth Cape Fear River; on Oak Island, 1 mile west of Fort Caswell.	194

SEVENTH COAST GUARD DISTRICT

COASTS OF SOUTH CAROLINA, GEORGIA, AND FLORIDA,
EAST OF THE APALACHICOLA RIVER

Name of station	State	Location	Aerial Identification Numbers
Sullivan's Island.....	South Carolina.....	On beach Sullivan's Island near north end of harbor entrance jetty.....	196
St. Simon Island.....	Georgia.....	On beach near south end of St. Simon Island.....	196
Ponce de Leon Inlet.....	Florida.....	Inside and south of Ponce de Leon Inlet about 1½ miles southeast by south from light.	203
Fort Pierce.....	do.....	South side of Fort Pierce Inlet entrance.....	206
Lake Worth Inlet.....	do.....	South side of Peanut Island, ½ mile west of Inlet.....	206

EIGHT COAST GUARD DISTRICT

COASTS OF FLORIDA, WEST OF THE APALACHICOLA RIVER,
ALABAMA, MISSISSIPPI, LOUISIANA, AND TEXAS

Name of station	State	Location	Aerial Identification Numbers
Santa Rosa.....	Florida.....	2½ miles east of west end of Santa Rosa Island.....	212
Grand Isle.....	Louisiana.....	On Grand Isle, 3 miles southwest of Barataria Pass.....	214
Sabine.....	Texas.....	West side of Sabine Pass, ¼ mile south of Sabine Pass Light.....	216
Galveston.....	do.....	East side Galveston Channel, ¼ mile north of Port Point Ferry.....	217
Freeport.....	do.....	North side entrance of Brazos River.....	219
Port O'Connor.....	do.....	North end Matagorda Island on Saturia Bayou.....	220
Port Aransas.....	do.....	Northeast end Mustang Island at east end Corpus Christi Channel.....	221
Port Isabel.....	do.....	South end Padre Island, at light.....	222

NINTH COAST GUARD DISTRICT

COASTS OF THE UNITED STATES BORDERING ON THE GREAT LAKES

Name of station	State	Location	Aerial Identification Numbers
Galloo Island.....	New York.....	On Gill Harbor near northeast end of Galloo Island about 8 miles east of Galloo Island Light.	281
Oswego.....	do.....	West side of harbor between DL & WRR Canal Dock and New York State Barge Canal Terminal.	282
Rochester.....	do.....	East side entrance to Genesee River.	283
Niagara.....	do.....	South side of point at Fort Niagara, east side north end of Niagara River.	284
Buffalo.....	do.....	South side north entrance of Buffalo Harbor, opposite Erie Basin.	285
Erie.....	Pennsylvania.....	North side entrance of Erie Harbor on southeast end of Presque Isle.	286
Ashtrabula.....	Ohio.....	East side of Ashtabula River about 1 mile from mouth of river.	287
Fairport.....	do.....	West side mouth of Grand River.	288
Cleveland.....	do.....	On west pier entrance Cuyahoga River, Cleveland Harbor.	289
Lorain.....	do.....	East side entrance of Black River, Lorain Harbor.	240
Marblehead.....	do.....	Near Quarry Dock, 1 mile northwest of Marblehead Light.	241
Belle Isle.....	Michigan.....	At Belle Isle Light, southeast point of island.	243
Port Huron.....	do.....	West side mouth of St. Clair River, 400 ft. south of Fort Gratiot Light.	246
Harbor Beach.....	do.....	On pier in harbor of refuge at Harbor Beach.	247
Tawas.....	do.....	Near Tawas Light on east side of Tawas Point.	250
Mackinac Island.....	do.....	On Bay, south side of Mackinac Island.	256
Beaver Island.....	do.....	At St. James Light on north east end of Beaver Island.	257
Charlevoix.....	do.....	South side west end of Pine River.	258
Frankfort.....	do.....	North side entrance to Lake Betina, at inner end of north pier.	263
Manistee.....	do.....	North side entrance of Manistee Harbor.	264
Ludington.....	do.....	North side entrance of Ludington Harbor.	266
Pentwater.....	do.....	North side entrance of Pentwater Harbor.	267
Muskegon.....	do.....	South side entrance of Muskegon Harbor.	269
Grand Haven.....	do.....	North side Grand River entrance of Grand Haven Harbor.	270
Holland.....	do.....	South side entrance to Lake Macatawa.	271
South Haven.....	do.....	South side Black River, entrance South Haven Harbor.	272
St. Joseph.....	do.....	North side St. Joseph River, entrance St. Joseph Harbor.	273
Michigan City.....	Indiana.....	East side entrance of Michigan City Harbor.	274
South Chicago.....	Illinois.....	On harbor, Calumet Park, South Chicago near Calumet Park 98th St. Light.	278
Jackson Park.....	do.....	On west side of lagoon at Jackson Park Yacht Harbor.	279
Chicago.....	do.....	South side of harbor entrance west of lock at corner of inner breakwater.	280
Wilmette Harbor.....	do.....	North side Wilmette Yacht Harbor.	281
Kenosha.....	Wisconsin.....	Southwest side of Washington Island inside Kenosha Harbor.	282
Racine.....	do.....	North side Root River near Racine North Pierhead Light.	283
Milwaukee.....	do.....	McKinley Park, southwest of north end of breakwater.	284
Sheboygan.....	do.....	North side Sheboygan River entrance of Sheboygan Harbor.	285
Two Rivers.....	do.....	North side entrance of Two Rivers Harbor.	286
Sturgeon Bay Canal.....	do.....	At light north side of Canal entrance.	288
Plum Island.....	do.....	Near northeast point of Plum Island on Detroit Island Passage.	290
Grand Marais (Harbor of Refuge).....	Michigan.....	West of harbor entrance, Grand Marais, Michigan.	296
Munising.....	do.....	On west side of Sand Point.	297
Marquette.....	do.....	On north point near Marquette Light.	298
Portage.....	do.....	About 1 mile south of east breakwater light on east side of Leweewa Upper Entrance.	300
Duluth.....	Minnesota.....	On Minnesota Point about $\frac{1}{4}$ mile south Duluth Ship Canal entrance Duluth Harbor.	304
North Superior.....	do.....	East side of Grand Marais Harbor.	305

ELEVENTH COAST GUARD DISTRICT

COAST OF CALIFORNIA, SOUTH OF LATITUDE 34° 58' N.

Name of station	State	Location	Aerial Identification Numbers
Point Arguello.....	California.....	On cove about $2\frac{1}{2}$ miles southeast of Point Arguello Light and Fog Signal.	307

TWELFTH COAST GUARD DISTRICT

COAST OF CALIFORNIA, NORTH OF LATITUDE 34° 58' N.

Name of station	State	Location	Aerial Identification Numbers
Monterey.....	California.....	On western shore of Monterey Harbor.....	806
Fort Point.....	do.....	On Presidio, southern side of entrance to San Francisco Bay.....	810
Point Reyes.....	do.....	On shore Drakes Bay, 2½ miles east of Point Reyes Light.....	812
Arena Cove.....	do.....	8 miles southeast from Point Arena Light, California.....	814
Humboldt Bay.....	do.....	North side entrance to Humboldt Bay.....	816

THIRTEENTH COAST GUARD DISTRICT

COASTS OF WASHINGTON AND OREGON

Name of station	State	Location	Aerial Identification Numbers
Port Orford.....	Oregon.....	On shore at Port Orford, 6 miles south of Cape Blanco.....	818
Coos Bay.....	do.....	South side entrance Coos Bay, about ½ mile east of Coos Head.....	820
Umpqua River.....	do.....	South side near entrance of Umpqua River.....	821
Siuslaw River.....	do.....	On north side near mouth of Siuslaw River.....	822
Yaquina Bay.....	do.....	Waterfront of Yaquina Bay, Newport.....	822
Tillamook Bay.....	do.....	North side entrance of Tillamook Bay.....	826
Point Adams.....	do.....	South side mouth Columbia River, 4½ miles west of Astoria Oregon.....	828
Cape Disappointment.....	Washington.....	On Cape Disappointment at Fort Canby, north side mouth of Columbia River.....	827
Willapa Bay.....	do.....	1½ miles east Willapa Bay Light, North Cove.....	829
Grays Harbor.....	do.....	Just south of Grays Harbor Light, at Westport, Washington.....	830
Quillayute River.....	do.....	South side mouth of Quillayute River, abreast James Island Light.....	831
Neah Bay.....	do.....	Shore of Neah Bay, about 5½ miles east of Cape Flattery Light.....	832