

## CHAPTER 1

## Introduction to Aids to Navigation

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## 1-1 GENERAL INFORMATION

## 1-1-1 Definition of an Aid to Navigation—

A. An aid to navigation may be defined in several ways. The following is an example of a *simple* definition:

An aid to navigation is a mark or guide for the mariner or navigator.

B. The following is the definition for the purpose of this manual:

An aid to navigation is any device, external to a vessel or aircraft, intended to assist a navigator to determine his position or safe course or to warn him of dangers or obstructions to navigation. Such a device may reveal itself to the navigator through the medium of light, sound, or electronics.

C. A navigational device on a vessel, for example, a compass, a radio direction finder, or a sounding machine or instrument, is not an aid to navigation as the term is used in this manual.

D. The expression, "Aid to Navigation," includes lighthouses (light stations), lightships, radiobeacons, radarbeacons, loran stations, fog signals, lighted and unlighted buoys, minor lights, and daybeacons.

"but is not limited to"

## 1-1-5 The Aids to Navigation System of the United States—

A. The mariner, the navigator, the owner, the operator, and shipping interests now may expect through Federal Government control a unified simple system of aids to navigation sufficient for the needs of shipping to make navigation easy and safe.

B. The system is designed to be useful from the mariner's or navigator's point of view. He may not be expected to understand how the engineer produces the marks and guides which he requires. He can expect effective and efficient management, administration, and operation of the system of aids to navigation.

C. From the mariner's viewpoint aids are provided in known locations for day, night, and thick weather navigation. For clear weather daytime navigation he uses radiobeacon and other electronic

guides, landmarks, daymarks, and occasionally lights. For night and thick weather navigation he uses radiobeacon and other electronic guides, daymarks when recognizable, lights identified by color and rhythm, and sound signals.

D. All aids to navigation should be readily identified, distinguished one from another, accurately located on maps or charts, and catalogued. Information in regard to aids should be disseminated with the least possible delay and irregularities corrected promptly so as not to misguide the mariner. All of this information should be made available by the Federal Government to the mariner and shipping interests in the form of maps or charts, Notice to Mariners, Light Lists, Coast Pilots, and in related publications. The work of the various Government agencies improving waterways for navigation and producing the information mentioned above is closely interrelated.

E. The administration and maintenance of the Aids to Navigation System are developed in considerable detail in the following chapters.

## 1-1-10 The Purpose of Aids to Navigation—

A. Aids to navigation are placed at various points along the coasts and navigable waterways as markers and guides to enable mariners to determine at all times their exact position with relation to the land and to hidden dangers. Within the bounds of actual necessity and reasonable cost, each and every aid is designed to be seen or heard over the greatest practicable area.

B. Aids to navigation assist mariners in making landfalls when approaching from overseas, mark isolated dangers, make it possible for vessels to follow the natural and improved channels, and provide a continuous chain of charted marks for the piloting of vessels.

C. As all aids to navigation serve the same general purpose, such structural differences as those between an unlighted buoy and a lightship, or a lighthouse and a radio beacon, are solely for the purpose of meeting the conditions and requirements of the particular location at which the aid is to be established.