

## **ECDIS, Nautical Charts & Publications**

Notice to ship owners, managers, Masters, Approved Nautical Inspectors, Recognised Organisations and surveyors

*This Notice supersedes BMA Information Bulletin No.51*

### **1. Purpose**

- 1.1. This Notice outlines the Bahamas' requirements for the carriage of Electronic Chart Display and Information Systems (ECDIS) and the carriage of nautical charts and publications in electronic and paper formats.
- 1.2. This Notice should be read in conjunction with International Maritime Organization (IMO) Resolution [A.817\(19\)](#), as amended by resolutions [MSC.64\(67\)](#) and [MSC.86\(70\)](#); Resolution [MSC.232\(82\)](#); Resolution [MSC.530 \(106\)](#) Circular [MSC.1/Circ.1503/Rev.2 ECDIS – Guidance for Good Practice and Appendices](#) and subject to the provisions of [MSC-MEPC.2/Circ.2 IMO requirements on carriage of publications on board ships](#) and [BMA MN044 ECDIS Training Requirements](#).

### **2. Application**

- 2.1. This Notice applies to all Bahamian ships to which [Regulation 19.2.1.4](#) of Chapter V of the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS), applies and which are required to carry charts and publications required by [SOLAS Regulation V/27](#).

### **3. General**

- 3.1. Paper nautical charts and publications, electronic navigational charts (ENC), Raster charts (RNC) and paper and electronic publications, carried under the provisions of SOLAS Chapter V, are to be corrected to the latest edition of "Notices to Mariners".
- 3.2. Notices to Mariners are available in both paper and electronic format and may be distributed to vessels directly by various means. Notices to Mariners in electronic format may be distributed to vessels directly by authorised chart agencies under the authority of government authorised Hydrograph offices.

3.3. Companies<sup>1</sup> operating Bahamian ships are required to meet the latest standards in relation to ECDIS published by the International Hydrographic Organization (IHO) from 01 July 2018. An up-to-date list of all the relevant IHO standards relating to ECDIS equipment can be accessed from the IHO website ([www.ihonet.int](http://www.ihonet.int)).

**4. Equivalence regarding digital electronic navigational charts, Raster navigational charts, nautical list of lights and other digital nautical publications.**

4.1. The Bahamas Maritime Authority (BMA) considers the carriage of SOLAS required documentation in an electronic format as being equivalent to the carriage of paper documentation, subject to the following:

- i. The electronic charts (ENC/Raster) and electronic publications must be issued officially, or otherwise authorised and approved, by a SOLAS Contracting Government;
- ii. The products must meet the requirements of marine navigation;
- iii. The products must be kept up to date, and adequate backup (see below) must be provided so that an ECDIS failure does not develop into a critical situation. A backup arrangement should provide a means of safe navigation for the remaining part of a voyage in the case of an ECDIS failure.
- iv. Local electronic versions of charts and publications issued by a third party pertaining to geographical areas of a country may be accepted if that party regularly receives official data and updates to its charts and publications from a SOLAS Contracting Government;
- v. The assessment of the acceptability for use onboard for the electronic products mentioned in iv above should be carried out by the Company, taking into account the above guidance on equivalence.

**5. Carriage and use of Electronic Chart Display and Information Systems (ECDIS)**

5.1. The definition of an ECDIS as contained in the Annex to MSC82.232(82) is:

*Electronic Chart Display and Information System (ECDIS) means a navigational information system which with adequate back-up arrangements can be accepted as complying with the up-to-date chart required by regulations V/19 and V/27 of the 1974 SOLAS Convention, as amended, by displaying selected information from a System Electronic Navigational Chart (SENC) with positional information from navigational sensors to assist the mariner in route planning and route monitoring, and if required display additional navigational-related information.*

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<sup>1</sup> The "Company" is the entity responsible for the management of the ship in accordance with the ISM Code. For ships to which the ISM Code is not applicable, the Company is the "Managing Owner" in accordance with Section 52 of the Merchant Shipping Act

5.2. Where an ECDIS is being used to meet the chart carriage requirements of SOLAS, it must:

- i. be type-approved;
- ii. use up-to-date electronic nautical charts (ENC);
- iii. be maintained to be compatible with the latest applicable International Hydrographic Organisation (IHO) standards; and
- iv. Have adequate, independent back-up arrangements in place.

5.3. SOLAS V/19 requires the carriage of ECDIS, conforming to the performance standards for electronic charts, to be fitted on certain vessels by the dates shown in SOLAS V/19.2.10.

5.4. SOLAS V/19.2.1.4 requires the carriage of nautical charts. The BMA recognises that ECDIS conforming to the performance standards for electronic charts satisfies the chart carriage requirements specified in SOLAS V/19.2.1.4, provided that back-up arrangements are provided, as required by SOLAS V/19.2.1.5, to ensure safe navigation in case of ECDIS failure.

5.5. For ships required to carry ECDIS, it is the responsibility of the Company to determine the form of chart to be used on board as the primary means of navigation. For compliance with SOLAS V/19.2.1.4 and 19.2.1.5, the following arrangements are deemed acceptable for Bahamian ships:

Primary system	Secondary requirement
ECDIS operating in electronic navigational chart (ENC) mode or, where ENC Coverage is not available, RCDS Mode	<b>Either:</b> a second independent ECDIS which has a separate power supply and data input, operating in electronic navigational chart (ENC) mode or, where ENC Coverage is not available and RCDS Mode is operating, Paper charts (adequate and up to date for the intended voyage). <b>OR</b> Paper charts (adequate and up to date for the intended voyage).
Paper charts	ECDIS Fitted (as required by SOLAS V/19.2.10 and complying with V/27.)

5.6. Training requirements for ECDIS are outlined in [BMA MN044 ECDIS Training Requirements](#).

- 5.7. The RCDS mode does not have the full functionality of ECDIS and can only be used together with an appropriate portfolio of up-to-date paper charts. Limitations of the RCDS mode are set out in Appendix 2 of MSC.1/Circ.1503/Rev.2.
- 5.8. A number of ECDIS operating anomalies have been identified. Owing to the complex nature of ECDIS, and in particular because it involves a mix of hardware, software and data, it is possible that further anomalies may exist. These are described in Module D of MSC.1/Circ.1503/Rev.2.
- 5.9. Proper ECDIS software maintenance is an important issue, and adequate measures need to be implemented by masters, shipowners and operators in accordance with the International Safety Management (ISM) Code.
- 5.10. Companies choosing to use Paper Charts as the primary means of navigation on vessels required to have ECDIS fitted should note the following:
  - i. The ECDIS must still comply with [A.817\(19\); MSC.530 \(106\)](#)/Rev.1 Performance Standards for Electronic Chart Display and Information Systems or MSC.232(82) revised performance standards for electronic chart display and information systems, depending on the date of their installation;
  - ii. To comply with SOLAS V/19 and V/27, the fitted ECDIS must be fitted with the latest up-to-date editions of ENC's or Raster Charts where ENC coverage is not available.
- 5.11. Navigational Officers on ships where paper charts are the primary means of Navigation, but ECDIS "IS FITTED" must be trained in the use of ECDIS, as required by [BMA MN044 ECDIS Training Requirements](#).

## **6. Electronic versions of nautical publications, lists of lights, tide tables and other nautical publications**

- 6.1. Electronic versions of nautical publications, lists of lights, tide tables and other nautical publications (except the International Code of Signals and the IAMSAR Manual, which must be carried in hard copy as per the annex to MSC-MEPC.2/Circ.2) are accepted by the BMA subject to the following:
  - i. The electronic versions shall be issued officially by an administration, authorised Hydrographical office or other approved organisation;
  - ii. The digital publications shall be available to the Officer of the Watch (OW), without limitations, on the bridge;
  - iii. The computer used shall be dedicated for information storage and retrieval and shall always be connected to the emergency source of power required by SOLAS II-1/42 or II-1/43; and

- iv. For back-up, the digital publications shall also be installed on another computer onboard, which shall also be made available to the OOW within a short period of time.

## **7. Queries**

- 7.1. Any queries on this Notice may be addressed to [tech@bahamasmaritime.com](mailto:tech@bahamasmaritime.com) or any BMA office.

## Revision History

Version	Description of Revision
1.0	First Issue
1.1	Links and latest guidance updated.
1.2	Periodic review. Update outdated Bulletin 138 reference to Marine Notice 44