
MSI SELF ASSESSMENT - NAVAREA IV and XII

Submitted by the United States

1. ACTION REQUIRED: None, submitted for information only.

2. COMMENTS:

a. Attached is Special Paragraph 58 published in U.S. Notice to Mariners 1/2005 regarding the promulgation of MSI in the United States. As can be seen from Figure 1 to the attachment, there are 25 operational NAVTEX stations in NAVAREA IV and XII. Please note that the United States has 12 operational NAVTEX facilities, including 1 on Guam (NAVAREA XI).

b. Additionally, within the limits of the NAVAREAs, the Canadian Coast Guard also provides NAVTEX coverage of much of the Great Lakes and their coastline. There are also NAVTEX stations in Bermuda and Greenland.

c. To meet the requirements of the U. S. Navy for HYDROLANTS and HYDROPACs, a store and forward Inmarsat-C SafetyNET receiver has been established in Naples, Italy to monitor the IOR and in San Diego, California for the POR.

d. The message totals:

Message Type	2001	2002	2003	2004
NAVAREA IV	482	518	506	416
HYDROLANTs	3310	2885	2422	2080
NAVAREA XII	393	368	384	350
HYDROPACs	2130	2467	2278	2003
TOTAL	6315	6238	5590	4849

e. To fulfill its responsibilities under Paragraph 6.2 of the IMO/IHO World-Wide Navigational Warning Service Guidance Document, S53, the NAVAREA IV& XII Co-ordinator offered, in May 2005 at the 3rd IHO Capacity Building Committee Meeting, to provide either a permanent or interim coastal warning service via the International SafetyNET Service for MesoAmerican-Caribbean Sea Hydrographic Commission Nations. Thus far, several nations have contacted NGA regarding this offer.

3. RECOMMENDATION: To be noted by the Commission.

ATTACHMENT 1

ARTICLE PUBLISHED IN US. NOTICE TO MARINERS No. 01/05

(58) PROMULGATION OF MARITIME SAFETY INFORMATION BY U.S. INFORMATION PROVIDERS.

The purpose of this information is to provide mariners with the details of the promulgation of Maritime Safety Information (MSI) via the Global Maritime Distress and Safety System (GMDSS) by U.S. information providers, namely the National Geospatial-Intelligence Agency (NGA), the U.S. Coast Guard (USCG), and the National Weather Service (NWS).

The equipment needed to receive MSI is a GMDSS type-approved Inmarsat-C transceiver for SafetyNET broadcasts via Inmarsat satellites and a NAVTEX receiver for Coastal Warnings. SafetyNET is an international service for the broadcast and automatic reception of MSI by means of direct printing through Inmarsat's Enhanced Group Call (EGC) system. NAVTEX is an internationally coordinated system for the automatic reception of MSI via MF 518 kHz. The area of coverage for the United States is NAVAREA/METAREA IV and XII for SafetyNET and for NAVTEX, approximately 200 nautical miles from each NAVTEX station (see figure 1). Additionally, the NWS is providing further coverage for NAVAREA/METAREAXVI (Peru) for weather forecasts and warnings.

The major categories of MSI in the United States for both SafetyNET and NAVTEX are:

- a. navigational warnings (including electronic navigation system messages such as Loran-C and GPS)
- b. meteorological warnings
- c. ice reports
- d. search and rescue information
- e. meteorological forecasts

Figure 2 details the scheduled times for the U.S. information providers and what types of broadcasts are being sent.

In order to ensure that all relevant SafetyNET MSI is received before sailing, it is recommended that the Inmarsat-C receiver remain in operation while the ship is in port. To receive SafetyNET traffic automatically, the ship's receiver must be set up properly at the start of the voyage:

- a. select the appropriate satellite (AOR-W, AOR-E, POR, IOR)
- b. enter extra NAVAREA/METAREA codes in addition to the one that the vessel is currently in, if desired
- c. key in the ship's position and ensure a periodic update (at least every 12 hours is recommended). This determines the NAVAREA/METAREA that will be monitored. If the position is not updated for more than 12 hours, ONLY geographically addressed messages with priorities greater than routine within the entire ocean region will be printed out.

In order to ensure that all relevant NAVTEX MSI is received before sailing, it is recommended that the NAVTEX receiver remain in operation while the ship is in port. To receive MSI automatically via NAVTEX, the ship's NAVTEX receiver must be programmed with the desired NAVTEX stations and subject identifiers.

It is intended that all NAVTEX weather be broadcast with subject indicator "B," for Meteorological Warnings, which cannot be rejected by the NAVTEX receiver, or "E" for routine forecasts. However, this cannot be fully implemented at the present time within the U.S. Therefore, all mariners in

U.S. waters should program their NAVTEX receivers to include subject indicator “E” in order to receive both warnings and routine weather forecasts via NAVTEX.

The repetition rates of SafetyNET and NAVTEX messages vary, depending on the type of broadcast and situation. NAVTEX messages are generally repeated at each scheduled time slot until canceled (usually every four hours). SafetyNET weather forecast messages from the NWS normally are sent once unless an unscheduled warning is being issued, in which case an echo is used. The echo is rebroadcasted six minutes after the initial transmission to give vessels which are transmitting at the time of the initial broadcast another opportunity to receive the message.

NGA promulgates all of its SafetyNET messages (which do not have a known cancellation within 24 hours of the initial broadcast) once each day until canceled. Those messages canceling others and those with a known expiration within 24 hours are sent only once.

For search and rescue, the USCG determines the repetition of the broadcast depending upon the type of incident, area of the incident, and known potential rescue vessels.

The USCG’s International Ice Patrol, which sends SafetyNET messages concerning the status of ice in the Atlantic Ocean, sends its traffic once.

All type-approved Inmarsat SafetyNET and NAVTEX receivers are designed to suppress redundant copies of correctly copied messages. Beginning 2004, National Weather Service hurricane advisories, and high seas forecasts containing warnings of hurricanes not forecast to occur within 48 hours, will be broadcast via SafetyNET with a priority code of “Safety” versus “Urgent”. For further discussion of GMDSS and its many aspects, users are encouraged to read the appropriate chapter in The American Practical Navigator (Bowditch) and/or in Publication 117, Radio Navigational Aids. Pub. 117 also lists in-depth worldwide GMDSS coverage. Other valuable GMDSS reference sources include:

- IMO Newsletters
- NOAA Mariners Weather Log (<http://www.vos.noaa.gov>)
- USCG Amver Bulletins
- USCG Local Notice to Mariners
- British Admiralty List of Radio Signals, Volumes 3 and 5
- Many commercial maritime magazines

FIGURE 1 NAVTEX COVERAGE

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FIGURE 2

**PROMULGATION OF MARITIME SAFETY INFORMATION BY U.S.
INFORMATION PROVIDERS**

SCHEDULED BROADCAST TIMES

WHAT	WHO	WHEN (UTC)	HOW	NAVAREA/ METAREA	SATELLITE
High seas warnings and forecasts	NWS	0430, 1030, 1630, 2230	SafetyNET	IV	AOR-W
High seas warnings and forecasts	NWS	0545, 1145, 1745, 2345	SafetyNET	XII	AOR-W/POR
High seas warnings and forecasts	NWS	0515, 1115, 1715, 2315	SafetyNET	XVI	AOR-W
Hurricane advisories West Atlantic	NWS	as required	SafetyNET	IV	AOR-W
Hurricane advisories East Pacific	NWS	as required	SafetyNET	XII	POR/AOR-W
Hurricane advisories Central Pacific	NWS	as required	SafetyNET	XII	POR
Long range navigational warnings	NGA	1000, 2200	SafetyNET	IV	AOR-W
Long range navigational warnings	NGA	1030, 2230	SafetyNET	XII	POR/AOR-W
Long range search and rescue	USCG	upon receipt	SafetyNET	IV/XII	AOR-W/POR
Coastal MSI	USCG	4 to 6 times daily for routine traffic; upon receipt for distress	NAVTEX	Generally, within 200 miles of the coastline	None; see Pub 117 for stations and times

Status of ice in North Atlantic Ocean	USCG	twice daily 0000, 1200	SafetyNET	IV	AOR-W
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