UNITED STATES COAST GUARD
U.S. Department of Homeland Security
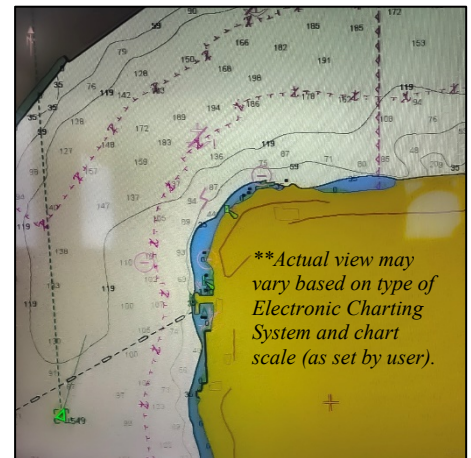
MARINE SAFETY ALERT

Inspections and Compliance Directorate

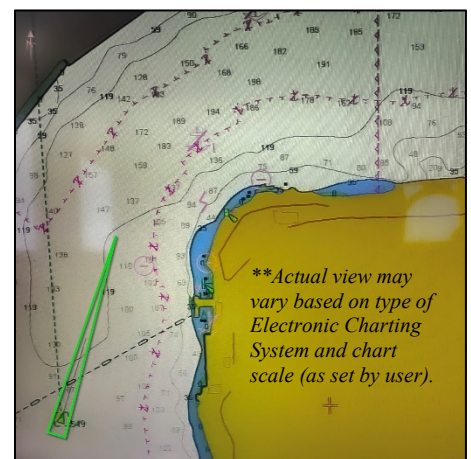## Automatic Identification System (AIS) – Accurate Broadcasts Don't Happen Automatically

A recent collision on the Mississippi River serves as an important reminder that accurate AIS data entry and display is essential to safe navigation as one of the many important tools used in providing vessel operators with a clear picture of potential upcoming vessel passing situations, especially on waterways with bends, bridges, or other visual obstructions. Although the investigation into this casualty is not yet complete, the following information is provided to alert owners and operators of the hazards created by inaccurate AIS data, and prompt them to review and update their procedures to prevent similar casualties from occurring.

Before sunrise, two towing vessels were approaching a bend on the Mississippi River. Neither vessel was broadcasting the total length overall of their tow to other AIS users. The first vessel's AIS broadcast showed its length at 72 feet, but the overall length of the vessel and its two-barge tow was 672 feet. The second vessel's AIS broadcast showed the length at 200 feet, but the overall length of the vessel and its 40-barge tow was 1,600 feet. Without the information regarding the total length of the other vessel and its tow, the operators did not have a full understanding of the pending passing situation. As the vessels rounded the bend and completed their turns, they collided, causing the down bound towing vessel to capsize and sink with several fatalities.

**Actual view may vary based on type of Electronic Charting System and chart scale (as set by user).

Figure 1: A representation of an AIS broadcast for a towing vessel pushing a 1,600' tow, and using Ship Type 31.

The AIS is a valuable tool which broadcasts critical vessel information to other vessels on the waterways. However, proper function of the AIS is dependent on accurate vessel data entry, including entering the proper ship type code and the full length of a vessel and its tow. The accurate display of a vessel's full length becomes particularly important in situations that prevent vessels from seeing each other until they are in very close proximity. The AIS carriage and operating requirements are found in Title 33 Code of Federal Regulations 164.46, which includes a requirement for the accurate input and upkeep of all AIS data fields. The Coast Guard Navigation Center has produced the AIS Encoding Guide, which provides instructions on how to populate all data fields in AIS, including steps to report the total length of the vessel and the vessel's tow. Given the wide variety of sizes and lengths of tows, and the heavy density of these types of vessels traveling on the country's marine transportation system, accurate AIS input is vital to an operator's ability to make informed navigational decisions.

**Actual view may vary based on type of Electronic Charting System and chart scale (as set by user).

Figure 2: A representation of an AIS broadcast for a towing vessel pushing a 1,600' tow, properly entering overall dimensions, and using Ship Type 57.

The Coast Guard **strongly recommends** that vessel Owners and Operators:

- Use the AIS Encoding Guide to ensure that accurate and up to date information is entered into the AIS, including, but not limited to, the overall dimensions of the vessel and its tow.

- For vessels towing ahead or alongside, use Ship Type 57 (not Ship Type 31) within the static data fields in order to broadcast the overall dimensions of the vessel and its tow.

- Ensure towing vessel personnel responsible for navigational duties have the appropriate training and resources in order to update AIS data when tow sizes change.
  Investigations and inspection personnel are encouraged to maintain an acute awareness of AIS data issues while investigating marine casualties, and initiate corrective actions as needed.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational, or material requirements. Developed by the Eighth District Investigations Office. Questions on this Safety Alert may be sent to D08-SMB-District-Prevention@uscg.mil.