



**UNITED STATES COAST GUARD**  
U.S. Department of Homeland Security

## **MARINE SAFETY ADVISORY**

Assistant Commandant for Marine Safety, Security and Stewardship

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Advisory 02-11

### **Take the Search out of Search and Rescue Upgrade to GPS enhanced EPIRBs**

When Emergency Position Indicating Radio Beacons (EPIRB) are activated in emergency situations the system transmits vessel identification information to rescuers. Traditional EPIRBs rely on satellite Doppler Shift to identify the distress location. There are a wide variety of Coast Guard approved EPIRBs on the market but many do not have the most up-to-date feature: the ability to transmit the EPIRB's GPS location.

Several recent casualty investigations have revealed that EPIRB owners are largely unaware that rescue efforts are significantly improved and your vessel's location transmitted more quickly and accurately when distress signals are initiated by *GPS enhanced EPIRBs*. GPS enhanced EPIRBs normally save 30 to 100 minutes in obtaining an accurate location. This is a significant amount of time and may mean the difference between life or death in cold water situations where the survival rate is decreased as each minute passes. New GPS enhanced EPIRBs provide a location accurate within 100 meters in 50 to 120 seconds. The GPS enhanced EPIRB not only alerts immediately, but also directs rescuers to a more exact location, allowing helicopter flight time to be devoted to rescue operations rather than conducting search operations.

An illustration of the effectiveness of GPS enhanced EPIRBs was the March 23, 2008 sinking of the F/V ALASKA RANGER in the Bering Sea 120 miles west of Dutch Harbor with 47 people on board. The vessel's Category I EPIRB was not enhanced with GPS which resulted in a delay in analyzing the data. In contrast, a personal EPIRB carried by a fisheries observer on board was outfitted with GPS, and it took only 11 minutes to identify that EPIRB's distress location. Fortunately a distress call was also made using the single side-band radio and rescuers immediately responded.

Since May 30<sup>th</sup> 2008, the Commercial Fishing Safety Advisory Committee has recommended that all new EPIRBs installed onboard commercial fishing vessels include an integral GPS receiver to permit automatic inclusion of position in the distress alert.

The National Transportation Safety Board in their recent Marine Accident Brief on the sinking of the commercial fishing vessel LADY MARY recommended to the Federal Communication Commission that for commercial vessels required to carry 406-MHz EPIRBs, those EPIRBs be required to broadcast vessel position data when activated.

The Coast Guard **strongly urges** vessel Owner/Operators to replace and upgrade existing EPIRBs with GPS enhanced EPIRBs.

This advisory is for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the USCG 13<sup>th</sup> District Prevention Staff. Questions may be forwarded to [HQS-PF-flidr-G-PCA@uscg.mil](mailto:HQS-PF-flidr-G-PCA@uscg.mil).

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