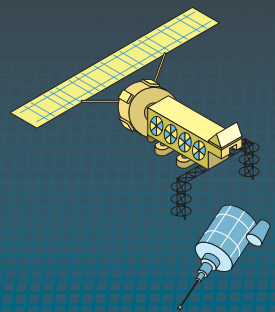




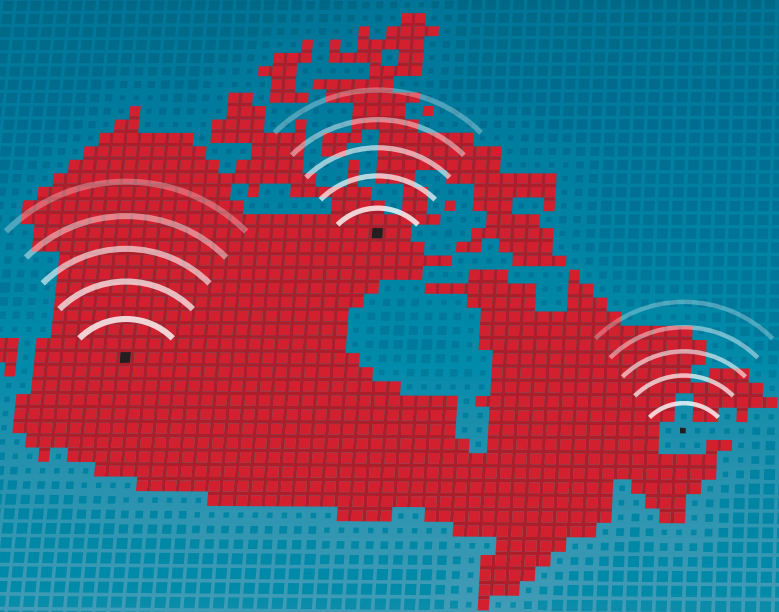
Government of Canada

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# SWITCH TO 406

## Your Lifeline to Survival



Every minute counts



# Canada

## Your Lifeline to Survival:

### The Responsible Use of Emergency Beacons in Canada

Emergency beacons help alert search and rescue (SAR) authorities to your distress, and every minute counts in a rescue effort.

On **February 1<sup>st</sup> 2009**, Cospas-Sarsat satellites will no longer hear distress signals from your 121.5/243 MHz emergency beacon. Cospas-Sarsat satellites will only recognize signals from 406 MHz emergency beacons.

Each 406 MHz emergency beacon is programmed with a unique identification code that becomes part of the distress signal. When an emergency beacon is properly registered, that code is linked to information in the database which helps the SAR system confirm that the distress is authentic, identify who is in need of help, and pinpoint their location.

When activated, an emergency beacon transmits a distress signal to the international SAR satellite system, Cospas-Sarsat ([www.cospas-sarsat.org](http://www.cospas-sarsat.org)). Cospas-Sarsat quickly processes the signal and relays it through the Canadian Mission Control Centre (CMCC) to one of the three Joint Rescue Coordination Centres (JRCC), who oversee Canada's three SAR regions. The JRCCs who are staffed by both Canadian Forces and Canadian Coast Guard personnel initiate the search and rescue response.

SAR in Canada is a shared responsibility. Highly trained volunteers and professionals from different jurisdictions work together—often facing challenging environments and weather conditions—to help those in need. SAR can be costly and dangerous. People who live, work, and travel in remote areas should do their best to protect themselves against hazardous situations. If you find yourself in distress, however, emergency beacons can help pinpoint your location and provide important information to guide a rescue response. It is very important for your safety, and the safety of your rescuers, that you use the right emergency beacon. There are three main types, each designed for a specific purpose.

## What type of emergency beacon should I use?

**Emergency Locator Transmitters (ELTs)** are specifically designed for use on board aircraft. ELTs are automatically activated under the force of a crash or can be activated manually by the pilot. There are two types of ELTs currently available to aircraft owners: 121.5/243 MHz analog emergency beacons which will no longer alert SAR authorities after 1 February 2009; and 406 MHz digital emergency beacons. 406 MHz emergency beacons transmit an encoded message that includes a unique identifier and may include location data if the unit is connected to a global positioning system (GPS).

The Canadian Aviation Regulations 605.38 states that 406 MHz ELTs must be registered with the Canadian Beacon Registry (<http://beacons.nss.gc.ca>). The information contained in the registry includes the owner's name, aircraft details and emergency contact information. SAR authorities cross-reference the emergency beacon ID with the registry and with a single phone call can determine if the distress signal is a false alert or can collect additional details in order to better respond to the incident.

**SAR Response:** The Canadian Forces is responsible for responding to SAR incidents involving aircraft. Volunteers from the Civil Air Search and Rescue Association may also be called upon to assist.



**Personal Locator Beacons (PLBs)** are specifically designed to be light-weight, portable, and to withstand the elements. They can only be triggered manually using a simple two-step process which helps to prevent accidental activation. Only 406 MHz PLBs are permitted in Canada and must be registered with the Canadian Beacon Registry (<http://beacons.nss.gc.ca>). The information contained in the registry includes the owner's name, and emergency contact information. Accessing the registry online, PLB owners can also provide detailed trip and route information to help SAR responders in the event of an emergency. Some newer units have an integrated global positioning system (GPS) or can be connected to a GPS unit that will transmit the beacon's exact location along with the encoded message. These emergency beacons may be available for rent or purchase from some outdoor outfitters.

Although many see PLBs as a low-cost alternative to ELTs, the pilot or one of the passengers must be conscious and able to activate the beacon to send the distress signal whereas the ELT would activate automatically regardless of the people being conscious or not. In addition, SAR authorities typically respond to PLB alerts with ground SAR resources.

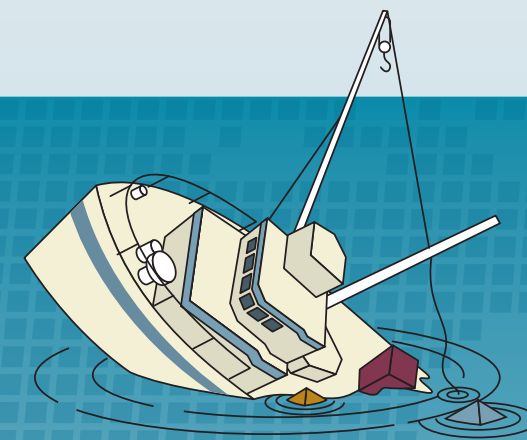
**SAR Response:** Police forces across Canada (e.g. Royal Canadian Mounted Police, Ontario Provincial Police, Sûreté du Québec, etc.) respond to SAR incidents on the ground, or on inland lakes and rivers within their jurisdiction. Specially trained ground SAR volunteers may also be called upon to assist. Parks Canada's public safety specialists are responsible for ground SAR within national parks.



**Emergency Position-Indicating Radio Beacon (EPIRB)** are required on ships, fishing vessels and tugboats above a certain size and weight—as outlined in the *Canada Shipping Act* and associated regulations. EPIRBs activate automatically when they come in contact with water or float away from their carrier and can also be activated manually. Only 406 MHz EPIRBs can be used in Canada. Like the other types of emergency beacons, 406 MHz EPIRBs must be registered with the Canadian Beacon Registry to ensure the owner's name, vessel details and emergency contact information are available in the event of a distress alert.

Vessels not required by law to carry an EPIRB (e.g. small pleasure craft) are encouraged to do so voluntarily.

**SAR Response:** The Canadian Coast Guard assisted by the Canadian Forces respond to maritime SAR incidents within Canada's ocean jurisdiction and in the Canadian waters of the Great Lakes and the St. Lawrence System. Volunteers of the Canadian Coast Guard Auxiliary may also be called upon to assist.



## It is your responsibility to use the right emergency beacon and make sure it is properly registered.

For more information on emergency beacons and how to register them, please visit the National Search and Rescue Secretariat web site: [www.nss.gc.ca](http://www.nss.gc.ca).