

SEARCH AND RESCUE

National Aeronautics and
Space Administration



NASA's Search and Rescue office, located at Goddard Space Flight Center in Greenbelt, Maryland, develops the technologies needed to rescue explorers in distress – both on Earth and in space.

TERRESTRIAL SEARCH AND RESCUE

For over 40 years, NASA has provided technical expertise to the Cospas-Sarsat program, the international satellite-aided search and rescue effort. The NASA Search and Rescue office designs and tests Cospas-Sarsat's 406 MHz distress beacons and its supporting flight and ground systems.

Once the beacons are activated, they send signals to satellites in space, which then relay the distress signals to ground stations. The Cospas-Sarsat network uses these signals to pinpoint the user's location anywhere in the world.

The network then sends the location to first responders, who initiate rescue operations. These beacons enable explorers with a sense of safety as they venture out on land, air, or sea.

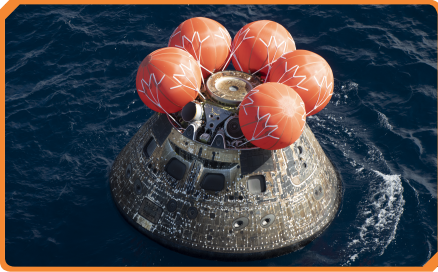


PARTNERSHIPS

- NASA Search and Rescue: Research and Development
- U.S. Air Force: In-Land Search and Rescue
- U.S. Coast Guard: Maritime Search and Rescue
- NOAA: Programmatic/Operational Sarsat Leadership

GOING BEYOND EARTH...

NASA's Search and Rescue office also develops emergency location beacons and associated technologies for human spaceflight.



ARTEMIS

For the Artemis I mission, the Search and Rescue office analyzed the Orion capsule's location beacon performance during splashdown and recovery. Team members located on the USS Portland used the Search and Rescue Intelligent Terminal (SAINT) application to track the Orion capsule as it landed in the Pacific Ocean. Both capsule beacons and the SAINT technology will be essential for safety on future missions to the Moon.

For crewed missions, Artemis astronauts will have even more safety precautions, including Advanced Next-Generation Emergency Locator (ANGEL) beacons attached to their life preservers. This will allow NASA to locate crew members in the event they need to leave the Orion capsule after splashdown or during a launch abort scenario.



LUNASAR

Through the Artemis missions, NASA plans to establish a long-term human presence on the Moon. The Search and Rescue office is developing lunar search and rescue, or LunaSAR, which will provide distress location services for all astronauts and rovers on the lunar surface.

COMMERCIAL CREW

The office also supports Commercial Crew Program missions to the International Space Station. The team monitors vehicles like the SpaceX Crew Dragon and Boeing CST-100 Starliner, which are equipped with SAR-developed emergency beacons. Just like Orion, these beacons help locate astronauts during splashdown or should a contingency occur.



LEARN MORE

To learn more about NASA's Search and Rescue office, visit our website:

<https://esc.gsfc.nasa.gov/projects/SAR>