



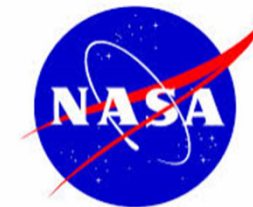
False Alerts and SARSAT Outreach Analysis

SARSAT Beacon Manufacturers Workshop 2023

LT Marisa Gedney

NOAA Commissioned Officer Corps

SARSAT Operations Support Officer





Background – False Alerts

- Approximately only 2% of all beacon activations in the US are confirmed to be distress alerts
- SARSAT outreach efforts focus on:
 - Decreasing false alerts
 - Increasing beacon registrations
 - Increasing public awareness of the system
- Every beacon activation must be treated as a distress
- The launching of MEOSAT has significantly improved coverage and increased non-distress alerts detected
- ELT's represent the largest portion of false alerts
- What's the issue? False alerts:
 - Waste SAR resources and funds
 - Frustrate SAR personnel
 - Adversely affect SAR personnel's ability to respond to actual distress

SARSAT
SEARCH & RESCUE SATELLITE-AIDED TRACKING
SAVING LIVES SINCE 1982

**HELP PREVENT 406 MHZ
DISTRESS BEACON FALSE ALERTS**
98% OF ALL 406 ELT, EPIRB AND PLB BEACON ACTIVATIONS ARE FALSE ALARMS
FOLLOW THE POINTS BELOW TO REDUCE NEEDLESS
RISK TO SEARCH AND RESCUE CREWS

**REGISTER YOUR
BEACON**
THAT IS THE FASTEST AND
SIMPLEST WAY FOR SAR
AUTHORITIES TO RESPOND TO A
DISTRESS OR CONFIRM A FALSE
ALERT

**FOLLOW
MANUFACTURER'S
INSTRUCTIONS**
KNOW HOW YOUR 406 BEACON
WORKS. MOST FALSE ALERTS
OCCUR DURING TESTING, HANDLING,
REPAIR AND INSTALLATION

**USE PROPER
DISPOSAL METHODS**
REMOVE AND RECYCLE THE
BATTERY WHEN DECOMMISSIONING
YOUR BEACON TO PREVENT
ACCIDENTAL ACTIVATION

IF A BEACON IS ACCIDENTALLY ACTIVATED
PLEASE CALL:
U.S. COAST GUARD: 1-888-406-USCG (8724)
U.S. AIR FORCE: 1-800-351-3051

www.sarsat.noaa.gov

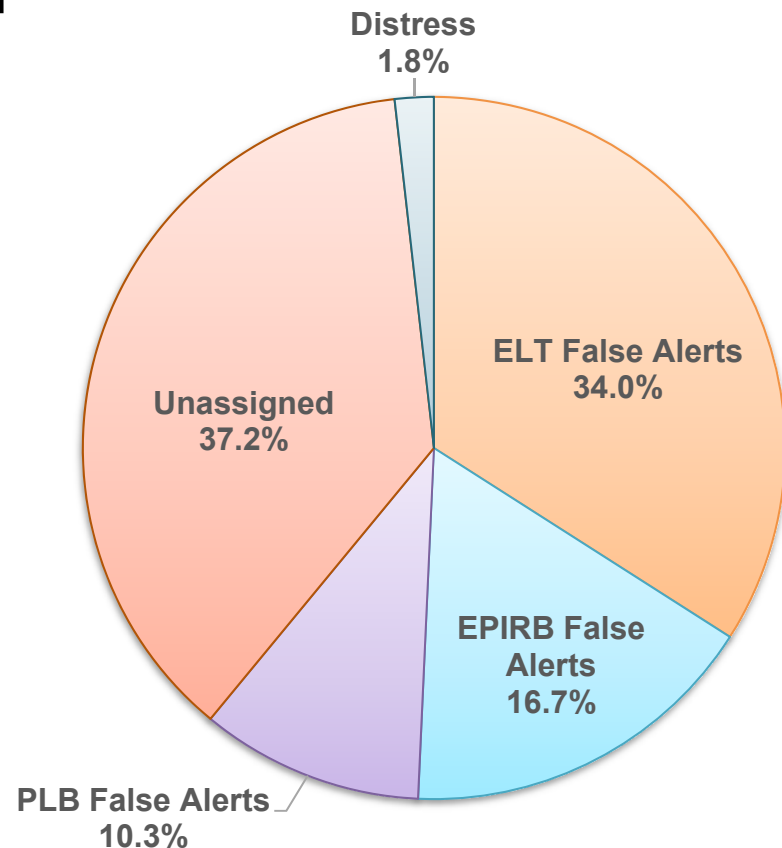


Non-Distress vs. Total Activations - 2022

In 2022, the USMCC received a total of **23,387** activations

- ELT confirmed false alerts: **7,961**
- EPIRB confirmed false alerts: **3,901**
- PLB confirmed false alerts: **2,399**
- Unassigned: **8,707**
- Distress: **419**

- Confirmed (operational) false alerts: **61.0%**
- False alerts and unassigned: **98.2%**





False Alerts By Beacon Type – 2022

	EPIRB	ELT	PLB
Activations*	4,292	8,161	2,567
Confirmed False Alerts*	3,591	7,783	2,316
2022 %*	83.7%	95.4%	90.2%
2021%	98.6%	98.1%	95.2%
2020%	98.3%	98.4%	

*Excludes Nov 2022

Non-Distress Alerts vs. Registrations – 2022



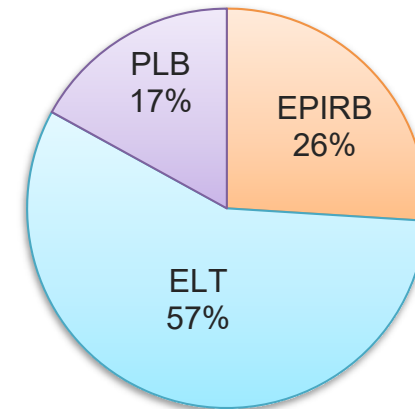
Non-Distress Alerts*: 22,968
Total Registered: 778,657

EPIRB:
26% of Non-Distress Alerts*
38% of Registered Beacons

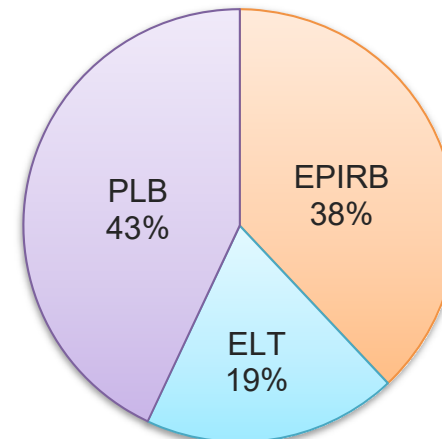
ELT:
57% of Non-Distress Alerts*
19% of Registered Beacons

PLB:
17% of Non-Distress Alerts*
43% of Registered Beacons

Non-Distress Alerts 2022*



Total Registered Beacons



*Excludes Nov 2022

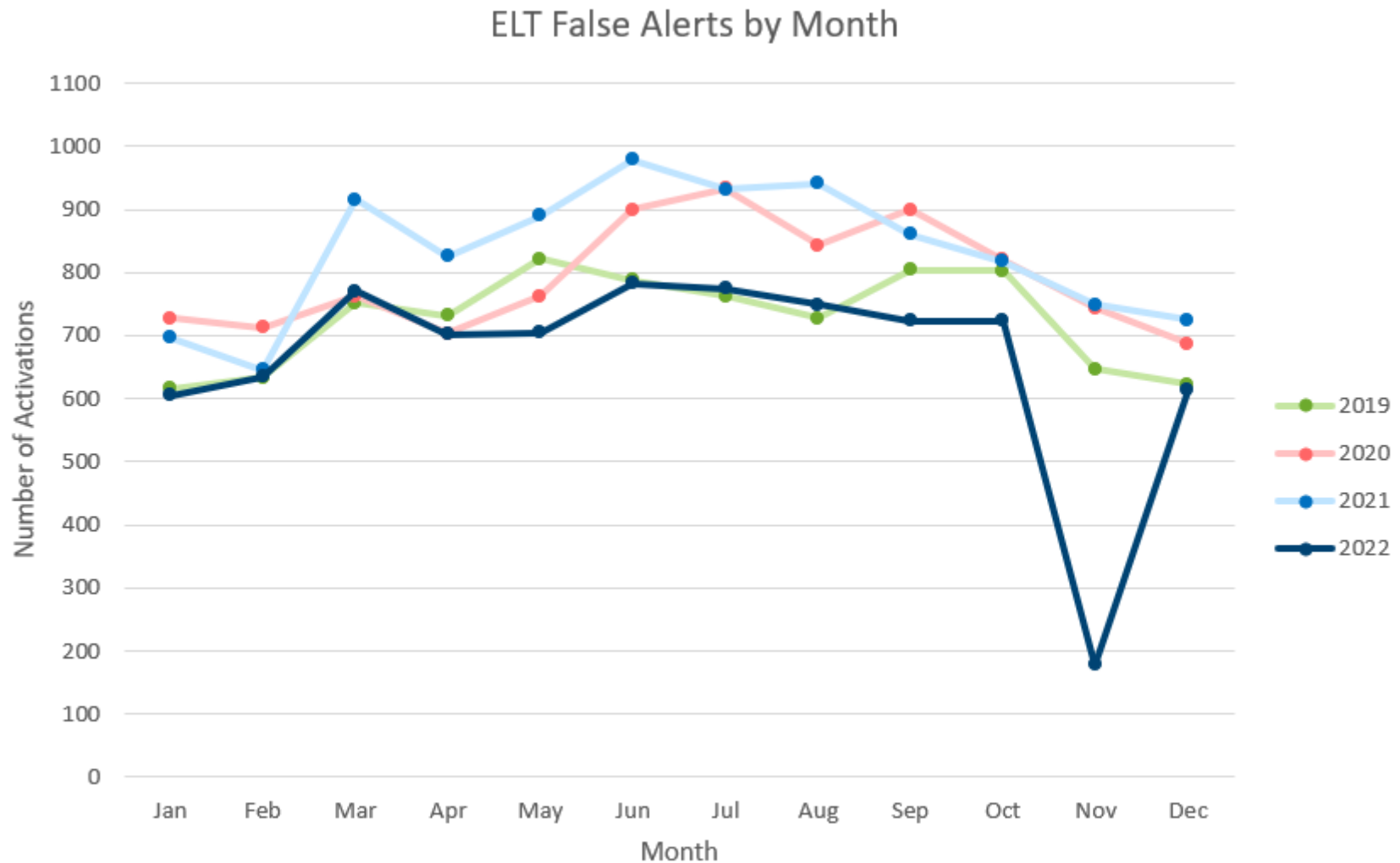


ELT False Alerts

- The main cause of ELT false alerts is testing
- Reported causes of mishandling:
 - Improperly activated in *operational* mode rather than in *self-test*
 - Inappropriate test procedures because they do not know which ELT model they are testing or model-specific instructions are unavailable when ELTs are tested
- Aviation Team of Experts (ATE) formed to address ELT false alerts and work with the FAA regarding beacon regulations



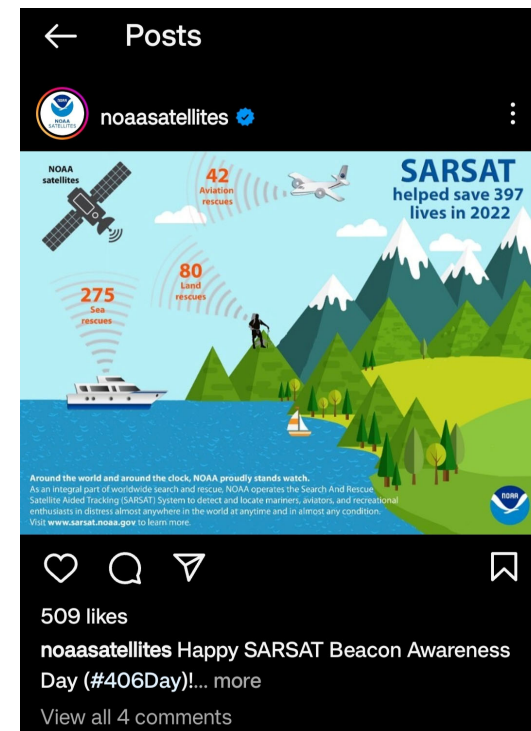
ELT Confirmed False Alerts by Month





Past Outreach Items/Events

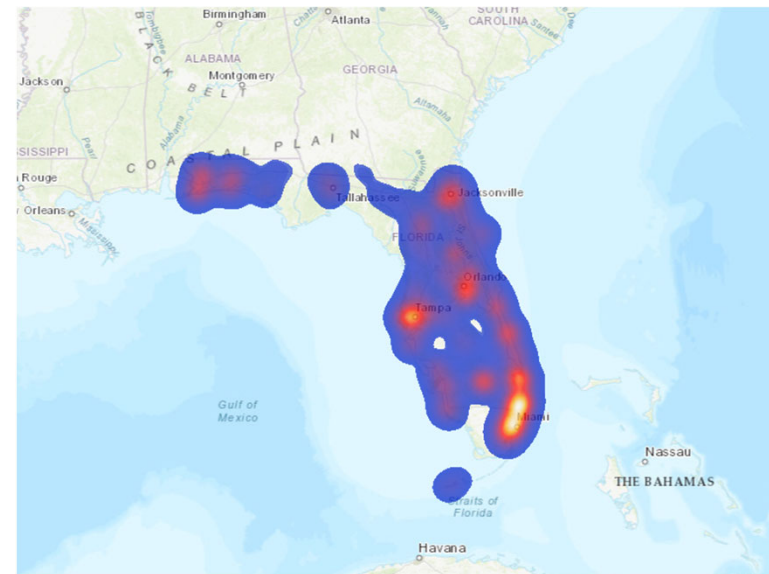
- COSPAS-SARSAT 40th Anniversary (Oct 2022)
- Miami Boat Show (Feb 2023)
- Weather Channel Segment (Feb 2023) and various media
- SAR Controllers Workshop (Mar 2023)
- 406 Day (Apr 2023)





Ongoing and Planned Outreach

- EAA AirVenture, Oshkosh Air Show (July 2023)
 - Focus on registrations and user awareness
- Aviation Team of Experts
 - GIS mapping of ELT false alert “hot spots”





Deliverables

- Second Generation Beacon registration forms completed
- USCG Auxiliary EPIRB reminder cards
- SARSAT emerging technologies brochure
 - Return Link Service
 - Second Generation Beacons
 - Autonomous Distress Tracking

Contact Information



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Importance of Registration

Register online at beaconregistration.noaa.gov

- Digital data transmitted by beacon provides nationality and type of beacon and aids in tracking.
- Emergency contact information and home port are listed in registration
- Tail number and identifying information can be encoded into the beacon
- Registration can include information about the owner/operator, specifics on aircraft or vessel, capability of the beacon and/or medical concerns of the owner. This information allows for a more coordinated, timely and prepared search and rescue response by SAR authorities.
- Often, false alerts are resolved prior to dispatching limited search and rescue resources, protecting those valuable resources for actual cases, saving tax dollars, and protecting search and rescue crews.

Home

 **SEARCH AND RESCUE**
SATELLITE AIDED TRACKING

United States 406 MHz Beacon Registration

Username

Password

[Forgot your username or password?](#)

[CREATE LOGIN](#)

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Total False Alerts by Month 2021

Nov. 2020 to Sep. 2021 False Alerts compared to Registration Age

