



# False Alerts and SARSAT Outreach Analysis

SARSAT Beacon Manufacturers Workshop  
2021

LT Marisa Gedney

NOAA Commissioned Officer Corps  
SARSAT Operations Support Officer





# Background

- Decreasing false alerts throughout the SARSAT system is an ongoing effort
- The launching of MEOSAT has significantly improved COSPAS-SARSAT coverage, and thus significantly increased non-distress alerts detected
- Search and Rescue is inherently dangerous and expensive
- Currently, ELT's represent the largest portion of false alerts and non-distress beacons.





# What's the Problem with False Alerts?

- Every beacon activation must initially be treated as “distress” by the appropriate RCC
- If discovered to be a “non-distress,” this false alert can:
  - Waste SAR resources and funds
  - Frustrate SAR personnel
  - Adversely affect SAR personnel's ability to respond to actual distress
- The USMCC detected 10,497 ELT false or undetermined activations in 2020: 176 of ELT activations were due to distress (98.4% down .2% from 98.6% (2019))
- Where the false activation reason was provided, 92.8% (3,373 of 3,636) of ELT activations were reported as being due to mishandling. (down 0.7% from 93.5% (2019))
- The USMCC detected 5,399 EPIRB false or undetermined in 2020: 93 of EPIRB activations were due to distress (98.3% remained the same compared to 98.3%(2019))
- Where the false activation reason was provided, 66% (917 of 1,390) of EPIRB activations were reported as being due to mishandling. (up 3% from 63% (2019))



# False Alert Rate by Beacon Type vs. Registrations by Beacon Type 2020

---

## ELTs

% of Total False Alerts	58%
% of Total Beacons Registered that are ELTs	19%

## EPIRBs

% of Total False Alerts	30%
% of Total Beacons Registered that are EPIRBs	39%

## PLBs

% of Total False Alerts	12%
% of Total Beacons Registered that are PLBs	42%



# What Causes ELT False Alerts?

---

Based on discussions with aircraft operators, aircraft mechanics, aircraft owner associations, and ELT manufacturers, the main cause of ELT false alerts is testing. It appears that ELTs are improperly activated in *operational* mode rather than in *self-test* mode, and that test conductors follow inappropriate test procedures because they do not know which ELT model they are testing or model-specific instructions are unavailable when ELTs are tested.

So let's all help the public and make it easy for them to understand how to test their ELTs!



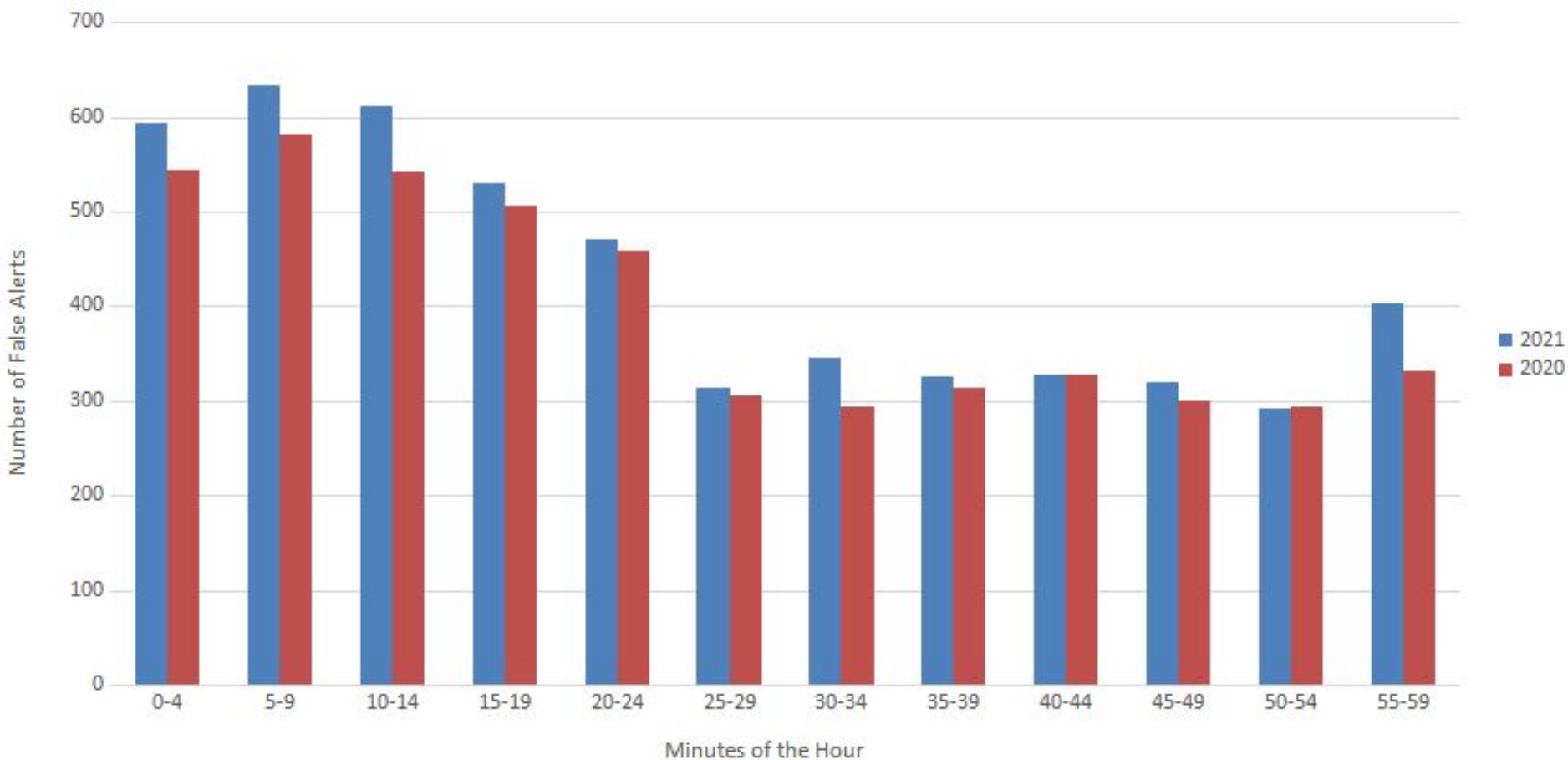
# Aviation Team of Experts (ATE)

---

- Primary objective: To increase awareness and decrease the number of false alerts along with improving registration
- Began May 2018, and includes Government and Industry partners
- Continuing actions:
  - Implement recommendations on outreach
  - To work with manufacturers to realize new avenues for awareness
  - To work with the FAA to update regulations concerning beacons

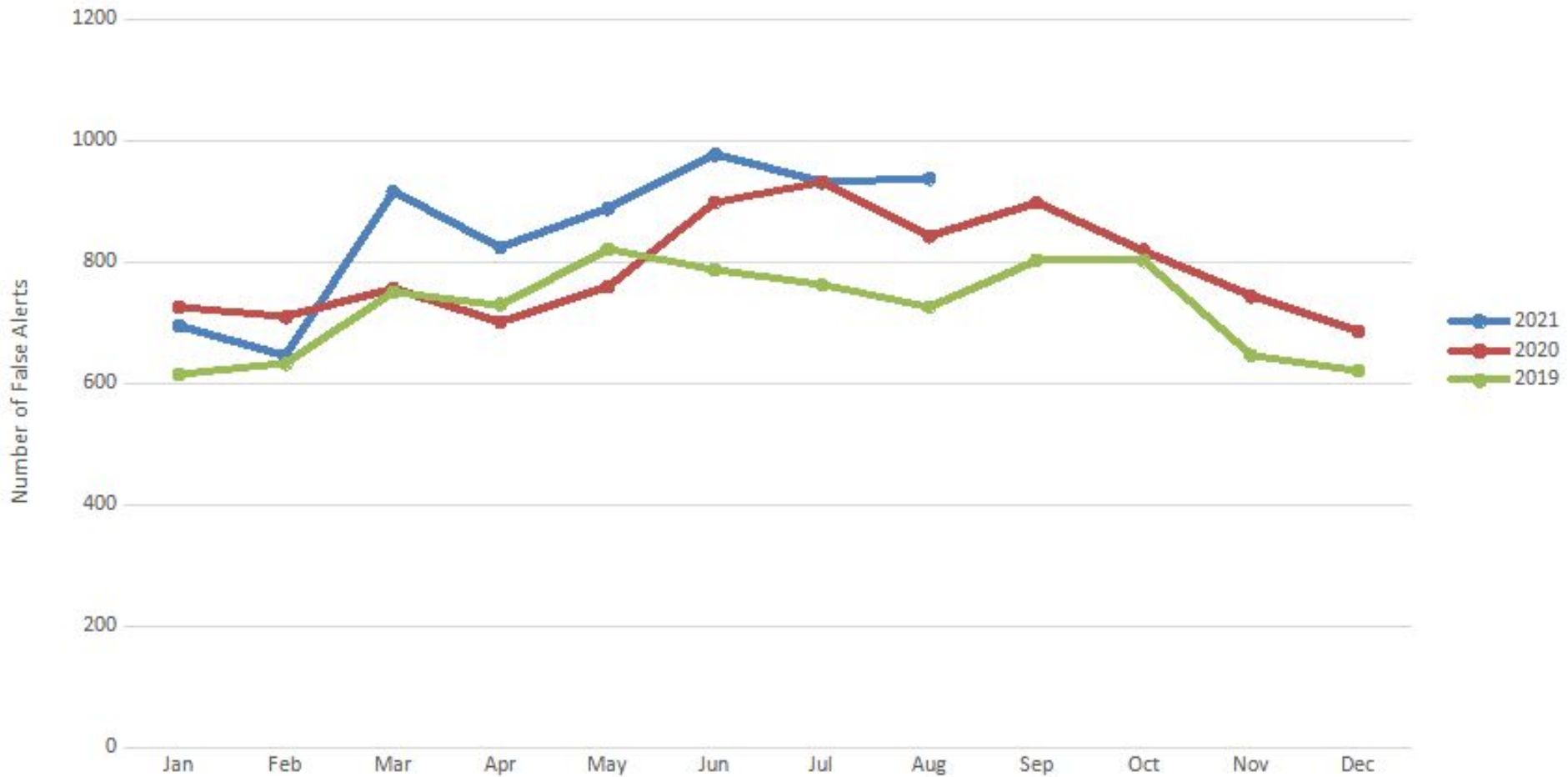


# ELT False Alerts by Minute of Hour





# Total False Alerts by Month 2021 (so far)

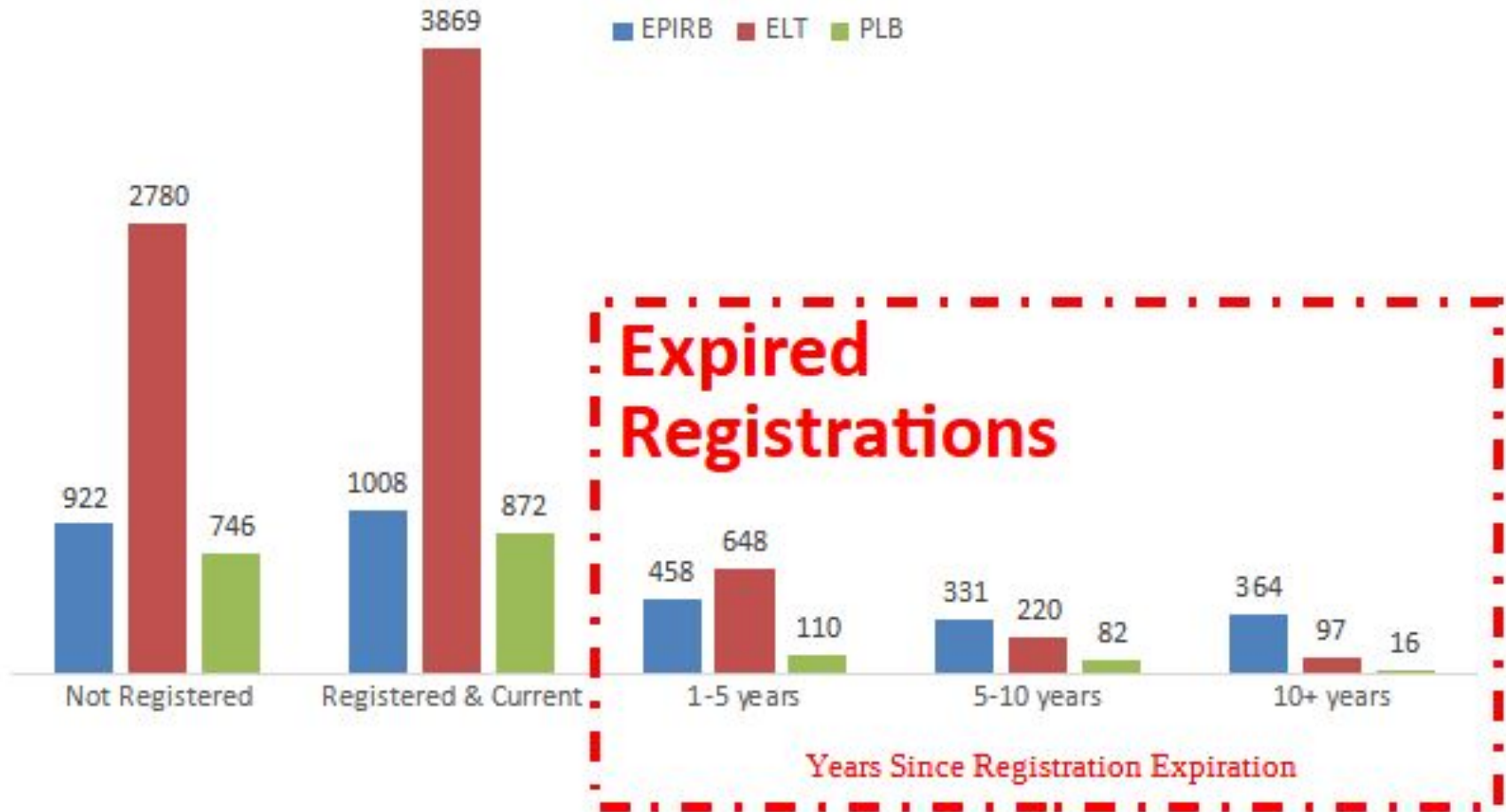






# Total False Alerts by Month 2021 (so far)

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





# Planned Outreach Events

---

- Miami Boat Show (February 2022)
- Beacon Manufacturers Workshop (May 2022)
- EAA AirVenture, Oshkosh Air Show (tentative for 2022)
- Social Media outreach with #406day and Twitter Q&A
- Aviation Team of Experts (every 6 mos.)
- AOPA Fly-in (Tentative due to COVID restrictions)




# Importance of Registration

## Register online at [beaconregistration.noaa.gov](https://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

 **NOAA** SEARCH AND RESCUE  
SATELLITE AIDED TRACKING

United States 406 MHz Beacon Registration

Username

Password

Forgot your username or password?

[CREATE LOGIN](#)

**\*\*\*Warning\*\*\***

This is a United States Department of Commerce computer system, which may be accessed and used only for official Government business by authorized personnel. Any unauthorized access or use of this computer system may result in criminal or civil action and/or prosecution.

All information on this computer system may be disseminated, recorded, stored, copied and collected by wire or electronic surveillance for official government purposes, including criminal investigation. Access to or use of this computer system by any person who is not authorized to do so is prohibited and may be a crime.

<b>SARSAAT Sites</b> <a href="#">SARSAAT Home</a> <a href="#">Request to Add Questions</a> <a href="#">List of Subscriptions</a> <a href="#">SARSAAT FAQ</a> <a href="#">Emergency Beacon Testing</a> <a href="#">Privacy Policy</a> <a href="#">SARSAAT Privacy Policy</a> <a href="#">Feedback</a>	<b>COSPAS-SARSAAT Sites</b> <a href="#">SARSAAT Website</a> <a href="#">Division of US Beavers and US Beavers</a> <a href="#">US Coast Guard and US Coast Guard</a> <a href="#">Beavers - SARSAAT - COSPAS-SARSAAT</a> <a href="#">International COSPAS-SARSAAT</a>	<b>Related Links</b> <a href="#">Privacy Policy</a> <a href="#">Privacy Act Statement</a> <a href="#">OMB Information</a> <a href="#">USA.gov</a> <a href="#">FOIA</a> <a href="#">Stacy.gov</a>
--	--	--



---

Discussion/Questions?

# Contact Information

---



LT Marisa Gedney

NOAA

Operations Officer

[Ops.Sarsat@noaa.gov](mailto:Ops.Sarsat@noaa.gov)

202-709-3202



# Back up slides



# Ideas for ELT Testing Outreach

---

ELT manufacturers help us create quick guides that are easy to read and understand—correct and concise.

The new quick guides undergo testing with the public at the Experimental Aircraft Association (EAA) AirVenture show in Oshkosh, Wisconsin

Beacon manufacturers and NOAA SARSAT create ELT testing pages with pictures of ELTs, quick guides, and manuals for ELTs to help personnel identify and utilize proper steps for testing their ELTs.

Any Ideas to help increase registration and decrease false alerts are thoroughly encouraged to be shared

All ELT Manufacturers are encouraged to participate in this initiative.





# CONUS Distribution of False Alerts 2020

