



**USHST**  
United States  
Helicopter Safety Team

**USHST 101**

# ABOUT US

## OUR VISION

The USHST's vision is a civil US registered helicopter community with zero fatal accidents.

## OUR MISSION

Through data-driven accident and flight safety data analyses, our mission is to understand the US helicopter community's safety issues and use that understanding to promote the development and implementation of voluntary, consensus-based risk mitigations.



# OUR GOAL

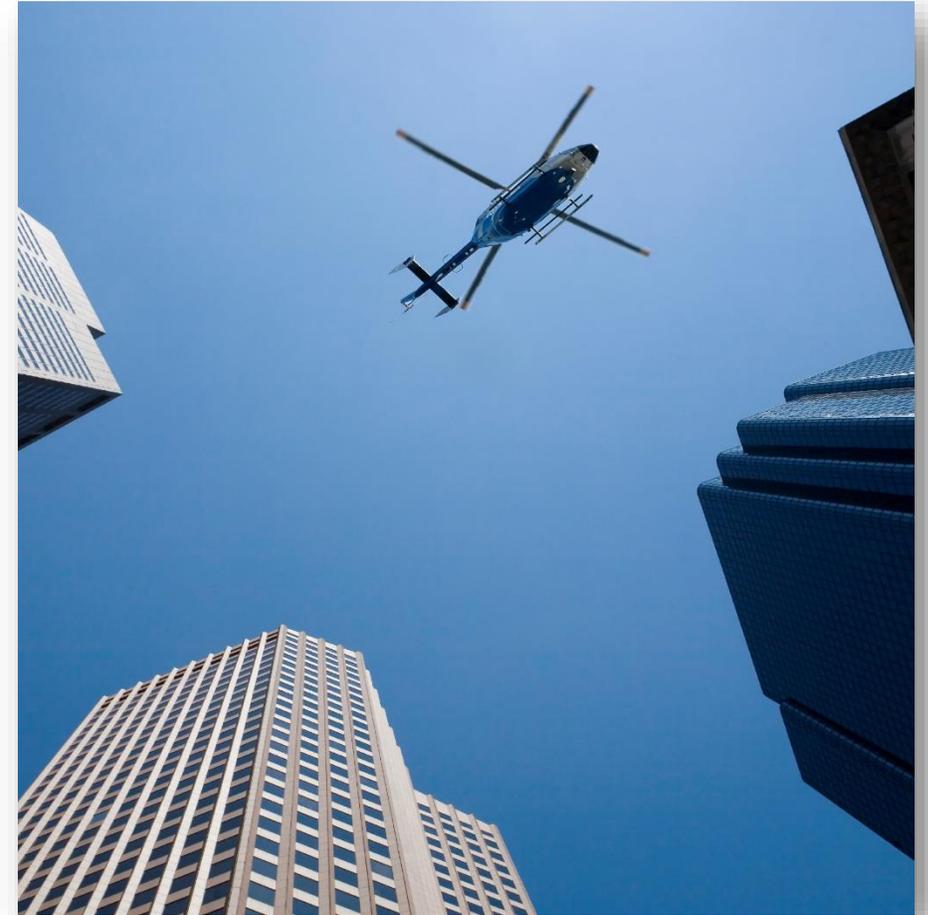
## Reduce Fatal Accident Rate

### Current Goal

Reduce the US helicopter 5-year average fatal accident rate to 0.55 by 2025.  
*(per 100,000 flight hours over 5 years)*

### Action-Oriented

Through 16 data-driven safety enhancements aimed at reducing fatal accidents.



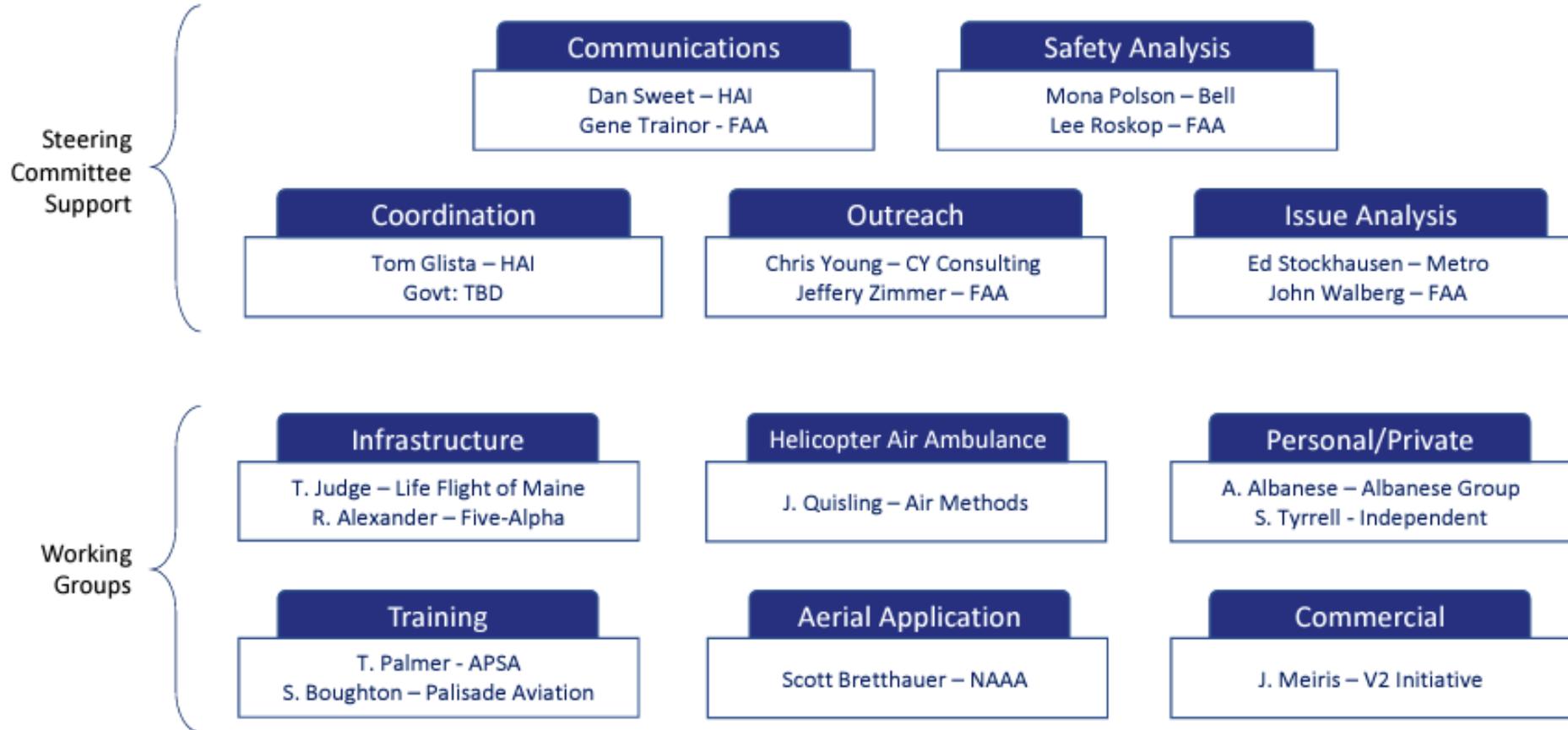
### USHST Steering Committee

**Co-Chairs: Chris Baur – Hughes Aerospace (industry) | Robert Reckert– FAA (government)**

Alex Burkett – GAMA	Christopher Lowenstein – Sikorsky	Nigel Speedy – Leonardo
Jorge Castillo – FAA	Spencer Mallett – Airbus	Tim Tucker – Robinson
Chris Hill – HAI	Tony Randall – Bell	Clarke Pleasants – ERAU
		Wes Van Dell – UND

### USHST Advisors

Nick Mayhew – Chair Emeritus  
 Manny Figlia – Grandview Aviation  
 Chihoon (Chich) Shin – NTSB  
 Van McKinney – NTSB



# Global Industry & Government Collaboration

Representative membership – several other entities are active members

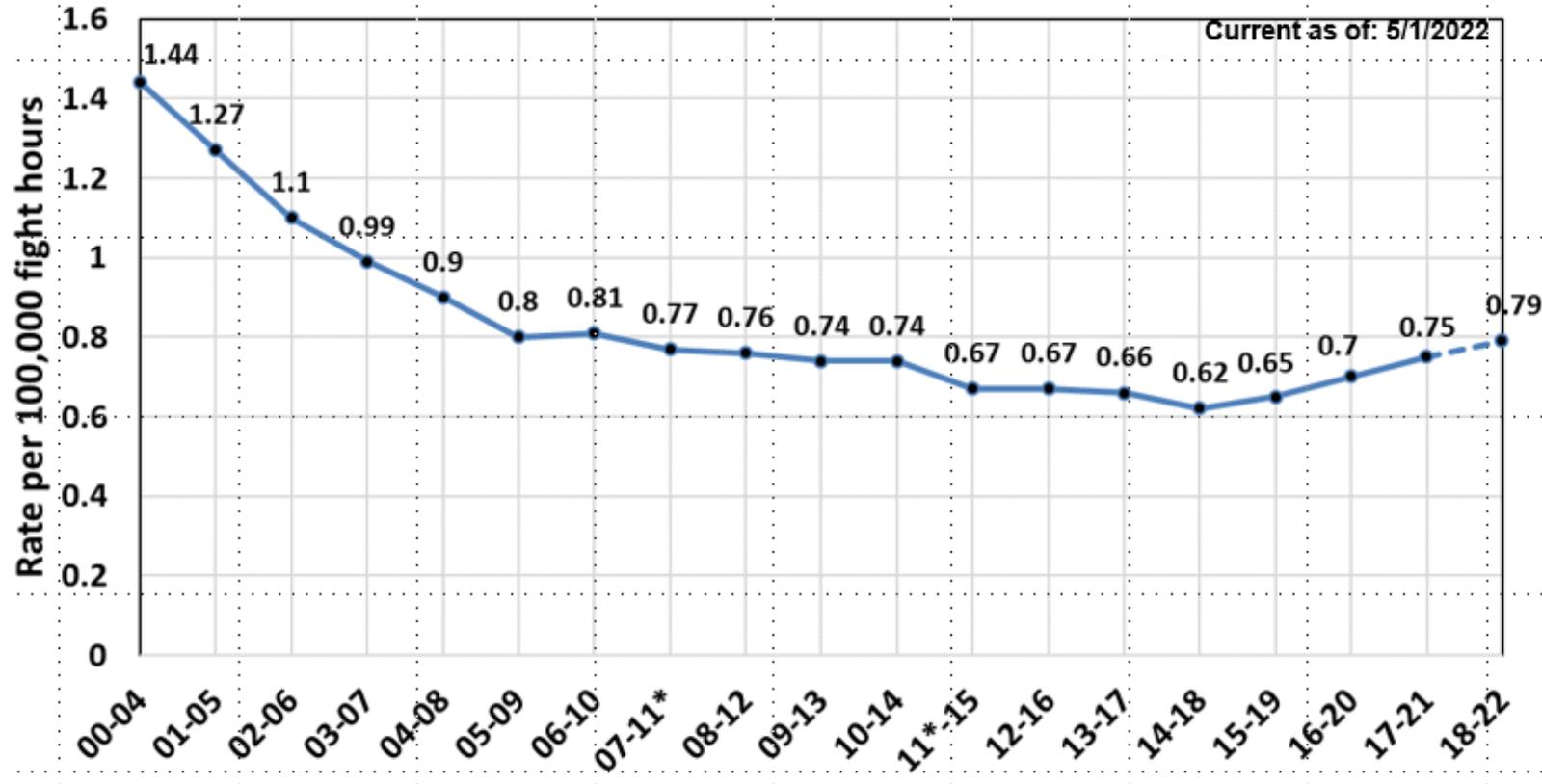


# Objective state Open Exchange of Timely, Relevant, and Harmonized Global VTOL Safety Data



Note: The presence or absence of logos does not imply formal endorsement of the VAST by any entity.

# U.S. Rotorcraft 5-Yr Average Fatal Accident Rate

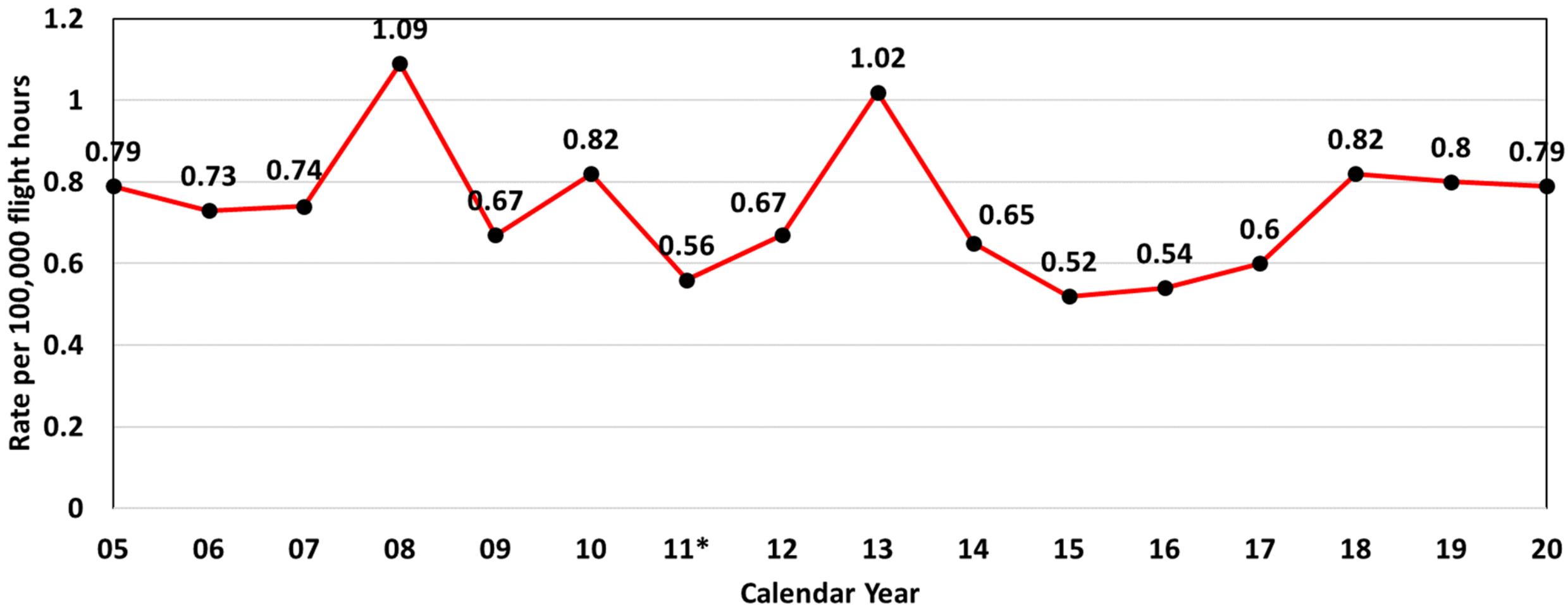


**GOAL**  
5 Year Avg of 0.55 for  
20-24 → ●

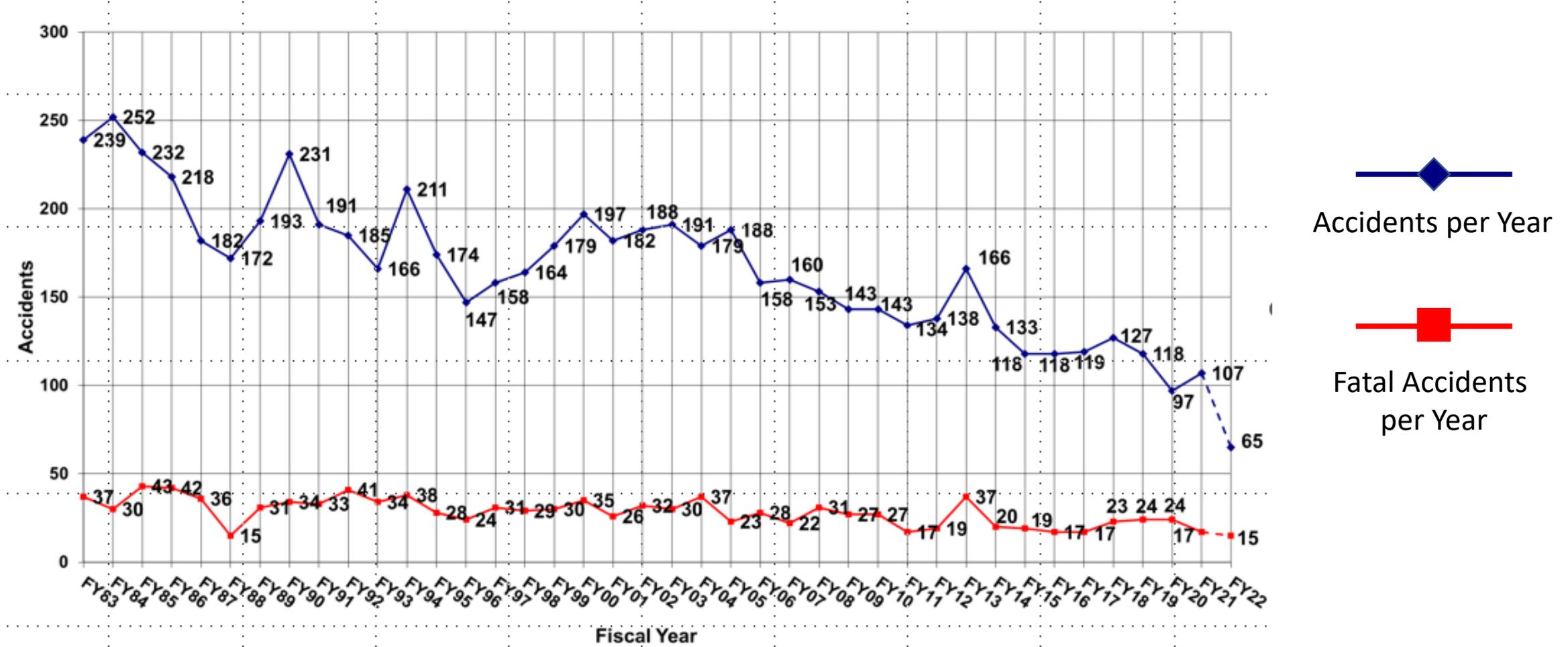
## Flight Hours Source

- 2001-2010, 2012-2020 from FAA's GA & Part 135 Activity Survey
- 2011, 2021 from FAA's Aerospace Forecast FY2021-2041

# Estimated U.S. Rotorcraft **FATAL** Accident Rate

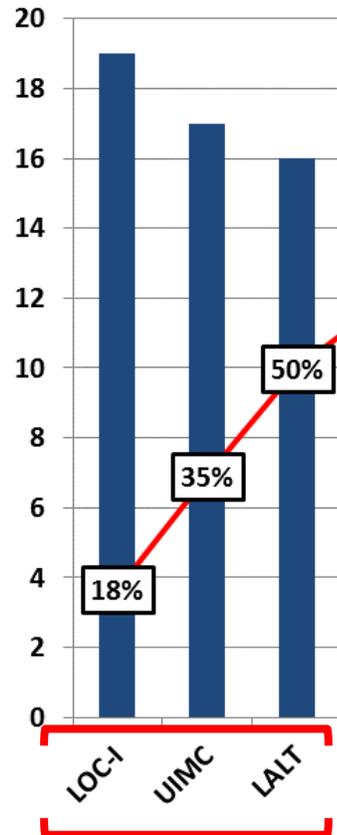


# U.S. Rotorcraft Accidents & Fatal Accident Counts

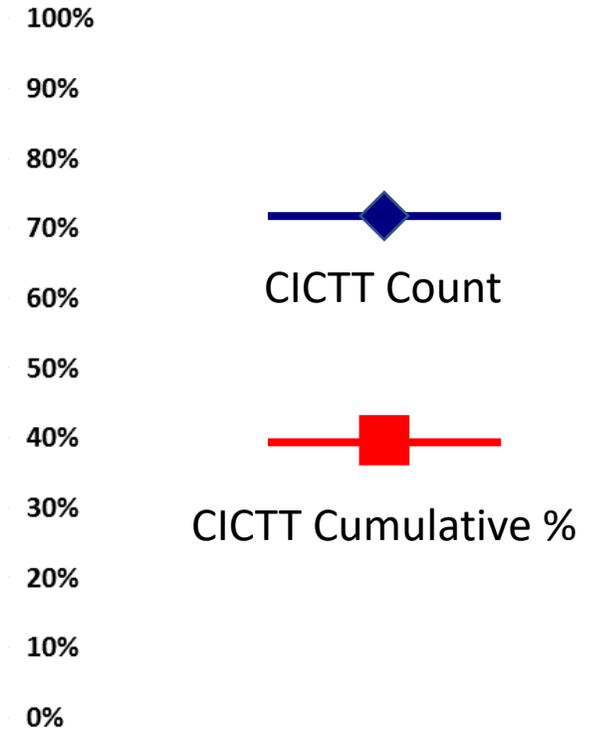


# Fatal Accidents by Priority Occurrence Category

(104 fatal accidents)

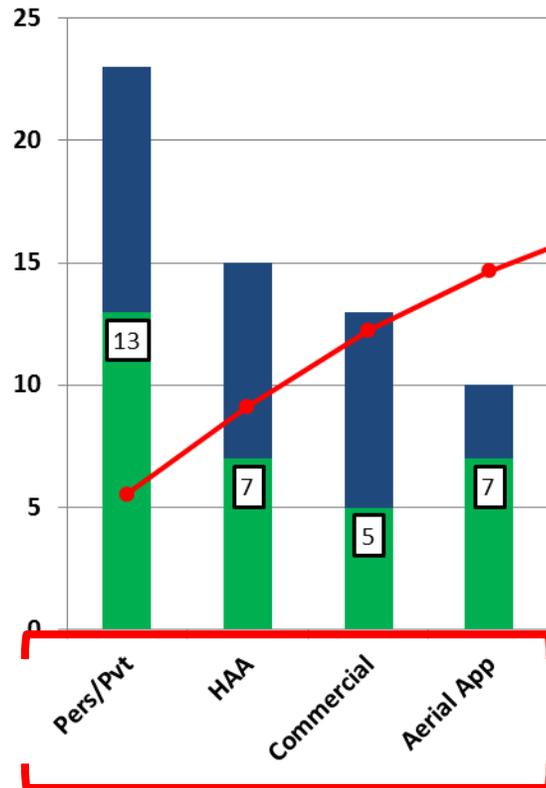


- Narrow our focus and prioritize our resources: Address the left side of the chart.
- Top 3 Occurrence Categories = 50% of 104 fatal accidents.
- Safety enhancements should address the Top 3 first.
  - LOC-I = Loss of Control – Inflight
  - UIMC = Unintended Flight In IMC
  - LALT = Low Altitude Operations

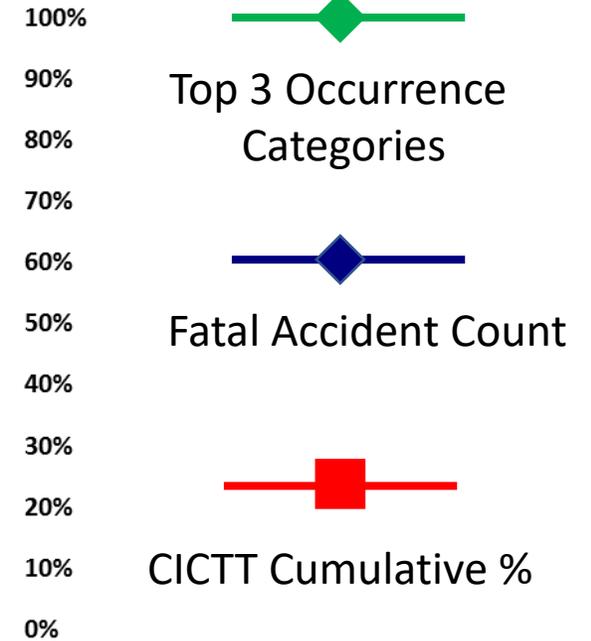


# Fatal Accidents by Industry

(104 fatal accidents)



- Top 4 Industries = 61 fatal accidents
- 52% of those 61 fatal accidents were tied to the Top 3 Occurrence Categories:
  - LOC-I = Loss of Control – Inflight
  - UIMC = Unintended Flight In IMC
  - LALT = Low Altitude Operations



# Outreach H-SEs – **ALL COMPLETE!**

- ☑ Utilities and Construction Practice Guide (13A)
- ☑ Safety Culture and Professionalism (19A)
- ☑ Detection and Management of Risk Level Changes During Flight (22A)
- ☑ Helicopter Final Walk Around & Security of External Cargo (28/112)
- ☑ Hazards of Over-the-Counter Medication (130)



# Policy H-SEs

- ❑ Develop Airman Certification System for Rotorcraft (30)



# Technology & Equipment H-SEs

- ☑ Stability Augmentation System & Autopilot (70)
- ☑ Simulator Modeling for Outside-the Envelope Flight Conditions (81)
- ☐ Helicopter Flight Data Monitoring (82)
- ☑ UAS in High-Risk Environments (90)
- ☑ Enhanced Helicopter Vision Systems (91)

A close-up photograph of a helicopter pilot wearing a helmet and night vision goggles, looking forward. The image is overlaid with a blue and orange graphic design.

**READY TO INVEST IN SAFETY TECH?**

Go with pros who install safety technologies that can **save lives, reduce workload, and enhance awareness.**

Spotlight on Safety

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The logo for Helicopter Association International (HAI) Safety, featuring a globe icon and the text "Helicopter Association International Safety".

# Training H-SEs

- Make & Model Transition Training (116)
- Simulation/Education to Develop Safe Decision Making (123)
- Understanding of Basic Helicopter Aerodynamics (124)
- Pre-Flight Risk Assessment for Student Flights (125)
- Training for Recognition & Recovery of Spatial Disorientation (127A)



# New H-SEs Under Development

## Five USHST H-SEs approved for development and implementation:

**H-SE 23-01:** Promote **conservative go/no-go decision making** (includes performance planning)

**H-SE 23-02:** Educate **hazards of low altitude operations** (includes consideration of wire strike protection devices, hazard detection capability, and emerging technology)

**H-SE 23-03:** Improve **risk management of night operations** (include factors unique to “dark” night operations)

**H-SE 23-04:** Improve **fatigue awareness** and risk mitigation of **scheduling factors** leading to fatigue

**H-SE 23-05:** Training on **effects of adverse wind situations**, particularly performance issues at low airspeed

# USHST Home Page



[USHST.org](https://www.ushst.org)



Through our web and social media promotional activities, we facilitate the exchange of safety materials and safety methods across the country and around the world.



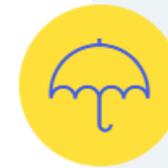
## H-SE Details

Learn About Our Safety Enhancements. [More Info.](#)



## Loss of Control

Helicopter Loss of Control Issues. [More Info.](#)



## Unintended IMC

Unintended Entry Into Instrument Meteorological Conditions. [More Info.](#)



## Training Resources

Are You a Helicopter Instructor? [More Info.](#)



## Private Flying

Do You Fly Your Own Private Helicopter? [More Info.](#)



## Infrastructure

Do you depend on Heliports, Weather, & IFR? [More Info.](#)



## Low Altitude Ops

Helicopter Low Altitude Operations. [More Info.](#)



## Commercial & Civil Flying

Do You Make a Living as a Helicopter pilot? [More Info.](#)



## Customers & Crews

Do You Fly in a Helicopter as a Customer ? [More Info.](#)



## Unintended Flight in Instrument Meteorological Conditions Safety Initiative

The YouTube Video

Online Training Resources (online)

Ground School, Simulator and Aircraft Training Resources

Recommended Practices

Videos

Planning Tools

Risk Management

Other Resources

# USHST Resources



Click on [RESOURCES](#) to view a wide variety of safety information and other related resources. This list is updated periodically.

[Recommended Practices](#)

[Reel Safety](#)

[Safety Bulletins](#)

[Guides](#)

[Airmanship Bulletins](#)

[Charts](#)

[Fact Sheets](#)

[Presentations](#)

[Repository](#)

[Key Charts](#)

[Essays](#)

[Safety Apps](#)

**Note: You can click on the live links listed above to go directly to that resource page.**

# USHST Video Resources



[USHST.org](https://www.ushst.org)



- Click on [VIDEOS](#) to watch dozens of recordings provided by several global contributors.
- The USHST also has a [YouTube Channel](#) with several safety promotional videos.



Note: Click on thumbnails to view that video.

# USHST Press Releases



[USHST.org](http://USHST.org)



Click on [RELEASES](#) to view dozens of USHST press releases summarizing key developments and activities affecting the rotorcraft industry dating back to 2014



# USHST Report Resources



[USHST.org](https://www.ushst.org)



Click on [REPORTS](#) to view a historical library of USHST safety reports and related analyses from 2014 through present day.



# Join the Safety Effort



[USBST.org](https://www.usbst.org)



Click on [FOLLOW USBST](#) to learn how you can become part of our team and help contribute to one of over a dozen helicopter safety enhancements or promote our team and output products.

## How You Can Help the USBST

- Join a Safety Enhancement team
- Distribute our thumb drives
- Link our web site link on your home page



# Follow USHST on Social Media

Track industry safety enhancements, trends and news



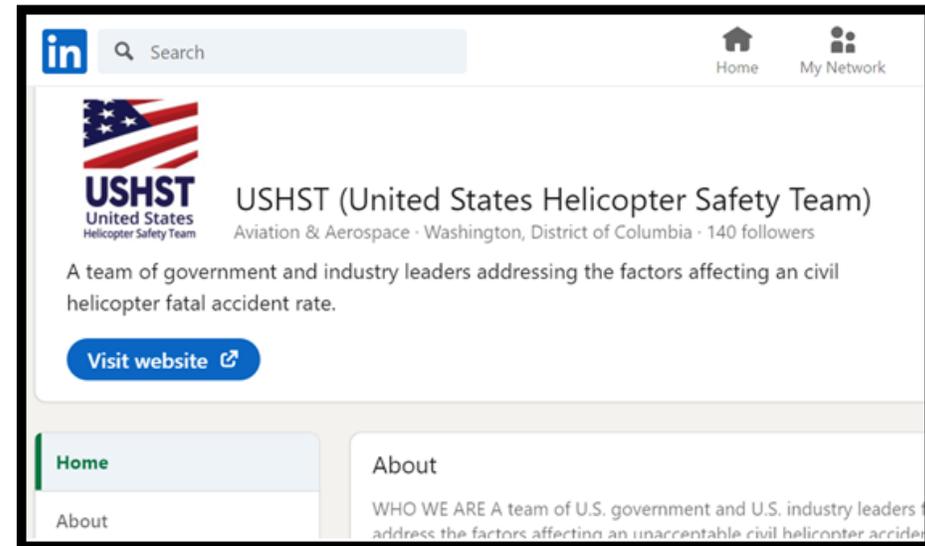
USHST on Facebook



@SafeHelicopters



USHST on LinkedIn



@USHST

# Outreach – Face-to-Face & Virtual Presentations

- Deliver safety enhancement focused workshops at HAI HELI-EXPO, NAAA Convention, CHC Safety Summit, Global Vertical Aviation Safety Conference, etc.
- Provide this presentation for delivery at industry events to support education.
- COVID-19 has not deterred us. Every two months, we host webinars focusing on safety enhancements.



# Outreach – Delivery of Safety Materials

## Industry Events

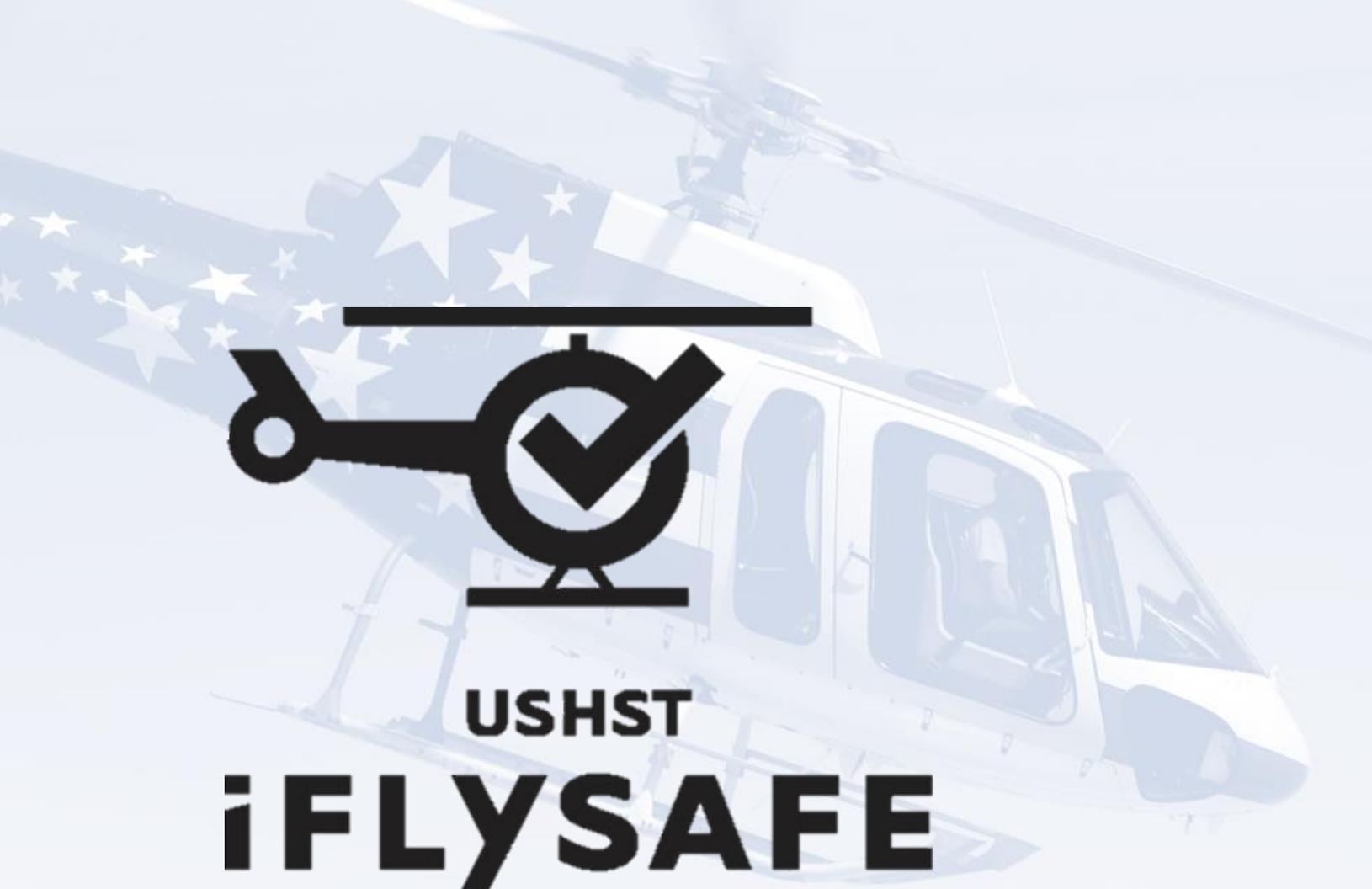
- HAI HELI-EXPO
- National Agricultural Aviation Association Convention
- Global Vertical Aviation Safety Conference
- Helicopter Air Medical Safety Conference
- Air Medical Transport Conference
- Helicopter FAASTeam Seminars
- Rotors n’ Ribs Indiana



*Did You Know that we distributed over 3,000 USB drives in 2019 to members of the helicopter industry? This provided a total of 450,000 safety documents, slide shows, and videos to pilots, mechanics, instructors, and operators.*

## Industry Groups

- Helicopter Association International
- NAAA, NBAA, etc.
- FAASTeam
- Helicopter Safety Alliance
- Robinson Helicopters, etc.
- Air Medical Operators Association
- Airborne Public Safety Association
- Embry-Riddle, other aviation schools



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**iFLYSAFE**



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