

# AVIATION SAFETY PRESENTATION SERIES

NATIONAL TRANSPORTATION SAFETY BOARD

EAA AIRVENTURE 🖈 JULY 24-29, 2023 🕇 OSHKOSH, WISCONSIN

## AGENDA

#### MONDAY, JULY 24

\* Vintage Hangar

Surviving an In-Flight Loss of Consciousness Due to Carbon Monoxide

Guest Speaker: Dan Bass, Pilot and Flight Instructor

1030-1115

1000-1045

\* Federal Pavilion

Seat Belts and Shoulder Harnesses -More Complicated Than You Think!

Amanda Taylor, Survival Factors Investigator

#### **TUESDAY, JULY 25**

1000-1045

**AOPA** Pavilion

#### What's New at the NTSB and What Are Its Priorities for Safety? Jennifer Homendy, NTSB Chair

1130-1245 • Repeats on 7/28

Forum 8

### Situational Awareness: Lessons from the **Calabasas Accident**

Mike Folkerts, Senior Air Safety Investigator

1400-1530

**\*** FAA Hangar **Pilot Professionalism: How Small Changes Can** Make a Big Impact Katherine Wilson, Senior Human Performance Investigator

### WEDNESDAY, JULY 26

0830-0945	Forum 6
Lessons Learned from Weathe Don Eick, Senior Meteorologist	r-Related Accidents
1030–1115 • <i>Repeats on 7/28</i>	* Federal Pavilion
Recent Updates to Search and	Analyze
NTSB Accident Investigations	-
Loren Groff, Chief Data Scientist	
THURSDAY, JULY 2	7
0900–0945 • <i>Repeats on 7/29</i>	* Vintage Hangar
Mastering Maintenance: Tools	to Prevent

mastering maintenance. To Aircraft Accidents Kristi Dunks, Business Process Manager

**\*** = FAA WINGS CREDIT AVAILABLE

0930–1015 • *Repeats on 7/28 and 7/29* \* Federal Pavilion

When Bias Goes Bad: Cognitive Bias and the **General Aviation Pilot** 

Sabrina Woods, Senior Human Performance Investigator

1000-1200

NTSB Booth IFP-3

# Meet the NTSB Chair

Join Chair Jennifer Homendy during a meet-and-greet at our booth in the International Federal Pavilion.



### FRIDAY, JULY 28

0830–0945 • Repeats on 7/29	Forum 8
When Bias Goes Bad: Cognitive Bia General Aviation Pilot	as and the
Sabrina Woods, Senior Human Perform	ance Investigator
1030-1115	* Federal Pavilion
Recent Updates to Search and Ana NTSB Accident Investigations Loren Groff, Chief Data Scientist	llyze
1330-1430	* Seaplane Base
Calabasas Accident Mike Folkerts, Senior Air Safety Investig	gator
0830-0945	Forum 8
When Bias Goes Bad: Cognitive Bia General Aviation Pilot Sabrina Woods, Senior Human Perform	as and the ance Investigator
1000-1115	Forum 9
Surviving an In-Flight Loss of Con Due to Carbon Monoxide Guest Speaker: Dan Bass, Pilot and Flig	sciousness ght Instructor
1430-1545	Forum 3
Mastering Maintenance: Tools to F Aircraft Accidents	Prevent

Kristi Dunks, Business Process Manager

Visit Our Booth IFP-3 in the International Federal Pavilion



### TSB AVIATION SAFETY PRESENTATION SERIES

EAA AIRVENTURE  $\star$  JULY 24–29, 2023  $\star$  OSHKOSH, WISCONSIN

### SESSION DESCRIPTIONS & PRESENTER BIOGRAPHIES

#### **Recent Updates to Search and Analyze NTSB Accident** Investigations

»	Wednesday, July 26	1030	* Federal Pavilion
»	Friday, July 28	1030	* Federal Pavilion

Not all lessons should be learned from firsthand experience, particularly when it comes to aviation safety. The NTSB has just released updates to its website search tool based on user feedback, including updated capabilities for aviation specific searches. The NTSB is also adding dashboards and new reporting features. See the latest updates and learn how to search NTSB investigation data, reports, and recommendations to improve your safety.

**Loren Groff** is the NTSB's chief data scientist and has been with the agency since 2002. He is a Gold Seal flight instructor, has a PhD in Human Factors Psychology, and before joining the NTSB he was employed as a regional airline pilot. He is (*slowly*) building a Pietenpol Air Camper.

# Mastering Maintenance: Tools to Prevent Aircraft Accidents

»	Thursday, July 27	0900 * Vintage Hangar
»	Saturday, July 29	1430

While maintenance keeps aircraft flying, occasionally errors can occur. By identifying these errors and understanding the role professionalism plays in aviation maintenance, you will be better equipped to prevent and detect errors and avoid an accident.

**Kristi Dunks** joined the NTSB in 2003 and is the Business Process Manager for the Office of Aviation Safety. In this role, she manages operational performance through data analysis and business process management. She is an A&P, a commercial pilot for helicopters and airplanes, and a flight instructor. Kristi owns a 1955 Super Cub and is restoring a 1933 Aeronca C-3.

#### CHECK OUR WEBSITE FOR THE LATEST PROGRAM UPDATES AND NTSB RESOURCES



Lessons Learned from Weather-Related Accidents

» Wednesday, July 26 0830 ..... Forum 6

Environmental factors or weather continues to have a significant impact on aviation safety, with about 23% of general aviation accidents attributed to weather. Weather-related accidents also have one of the highest fatality rates, accounting for 30% of all fatalities. This presentation reviews several weather-related accidents and discusses actions the pilots could have taken to avoid the accidents. Topics include obtaining weather, receiving updates, getting weather in the cockpit, and making good weather decisions. Case studies related to adverse winds, VFR into IMC conditions and thunderstorm encounters will be reviewed.

**Don Eick** is the NTSB's senior meteorologist, with more than 25 years in the Office of Aviation Safety. He has assisted more than 1,500 investigations. Before joining the NTSB, he was the head of meteorology for a major airline. He holds degrees in Aeronautics from Embry-Riddle Aeronautical University and Meteorology from Florida State University, as well as private pilot, aircraft dispatcher, and weather observer certificates.

#### Pilot Professionalism: How Small Changes Can Make a Big Impact

»	Tuesday, July 25	1400		✤ FAA Hangar
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We often hear the phrase "Don't sweat the small stuff". But when it comes to aviation safety, the "small stuff" can have a big impact. Join this presentation that discusses several case studies and how small changes towards professionalism could have broken the accident chain.

**Katherine Wilson** is a senior human performance investigator with the NTSB since 2008. She holds a Ph.D. in Applied Experimental and Human Factors Psychology from the University of Central Florida, a M.S. in Modeling and Simulation from the University of Central Florida, and a B.S. in Aerospace Studies from Embry-Riddle Aeronautical University.

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SESSION DESCRIPTIONS & PRESENTER BIOGRAPHIES (Continued)

# Seat Belts and Shoulder Harnesses – More Complicated than You Think!

» Monday, July 24 1030 ..... \* Federal Pavilion

Ensuring the restraint and seating systems in your airplane are installed correctly and in good working condition can mean the difference between minor and serious injuries in a crash. This presentation covers the basics of restraint systems including the importance of proper installation considerations and maintenance. Case studies will be discussed involving restraint issues to reinforce the importance of pilots and maintainers diligently attending to these sometimes-overlooked systems.

**Amanda Taylor** is a senior survival factors investigator in the Office of Aviation Safety. Before joining the NTSB, she worked for the FAA for almost 15 years as a research engineer for the Civil Aerospace Medical Institute in occupant protection and crashworthiness. In that role, she conducted hundreds of crash tests from components to full-scale impacts. She has a master's degree in engineering from Purdue University and has authored or co-authored several papers concerning the safety of aircraft seats and restraint systems.

# Situational Awareness Lessons from the Calabasas Accident

»	Tuesday, July 25	1130 Forum 8
»	Friday, July 28	1330 * Seaplane Base

How do we, as pilots, train and prepare ourselves to maintain our situational awareness and avoid the potential for spatial disorientation and other loss of aircraft control type accidents? Learn the lessons from the well-known Calabasas accident, as well as other accident case studies, that can help you "win the battle" to improve your situational awareness.

**Mike Folkerts** is a senior air safety investigator with the NTSB who has investigated more than 300 civilian aircraft accidents. Before joining the NTSB, he was a pilot in the US Air Force for 25 years and served as an investigator at the Air Force Safety Center. He is an airline transport pilot and flight instructor with more than 7,000 flight hours in a variety of civilian and military aircraft, and has taught safety courses for Embry-Riddle Aeronautical University.

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https://www.ntsb.gov/news/events/pages/2023oshkosh.aspx

# When Bias Goes Bad: Cognitive Bias and the General Aviation Pilot

»	Thursday, July 27	0930 🗱 Federal Pavilion
»	Friday, July 28	0830
»	Saturday, July 29	0830

Bias often gets a bad rap but by design, it is actually meant to be a decision-making tool—a short cut to ensure you make the best decision in the shortest amount of time. Using case studies and a little science, we will take a look at when bias goes "bad" and results in an accident or significant incident. We will also discuss some mitigative tools to help break the bad.

**Sabrina Woods** is a senior human performance investigator in the Office of Aviation Safety. Prior to joining the NTSB, she was an aviation accident/incident investigator for the FAA, human factors scientist for the FAA's Air Traffic Organization, and an associate writer and editor for the general aviation magazine the *FAA Safety Briefing*. She has over 15 years of experience in aircraft accident investigation with the NTSB, FAA and the US Air Force, and earned a Doctorate in Aviation Human Factors from Embry-Riddle Aeronautical University.

#### **Guest Speaker**

# Surviving an In-Flight Loss of Consciousness Due to Carbon Monoxide

»	Monday, July 24	1000 \star Vintage Hangar
»	Saturday, July 29	1000

In February of 2017, flight instructor Dan Bass had a harrowing experience with carbon monoxide (CO) in the cockpit. He lost consciousness in flight and survived only due to dumb luck. Dan recounts that day and the lessons learned, so that other pilots don't rely on their luck to prevent a CO accident.

**Dan Bass** learned to love aviation while flying with his Dad. He flew solo on his 16th birthday and received his pilot's certificate on his 17th birthday. He is a flight instructor and owner of an Ercoupe and a Mooney 231. His biggest claim to fame is surviving his unconscious landing in his M20C Mooney due to carbon monoxide poisoning in 2017. In his spare time, he is President of Mec-Pro Manufacturing Inc. in Winona, Minnesota and is husband to Deanna and father to their two daughters, Lilla (age 10) and Maia (age 9).

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