

### 2024 Glider Accident Review

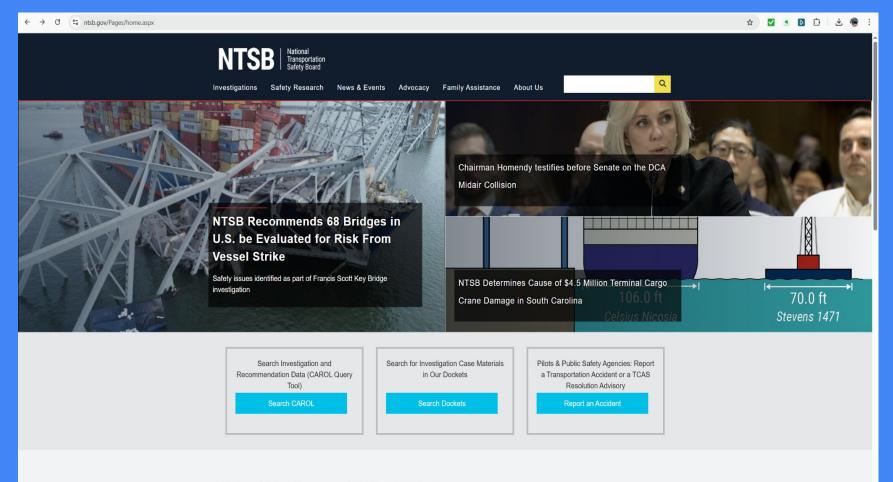
NESA Spring Safety Meeting April 5, 2025 Dr. Gerald A Smith, DMD, CFIG



# A few words about intent and methodology...

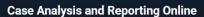


# Primary Sources are NTSB database



Who We Are and What We Do







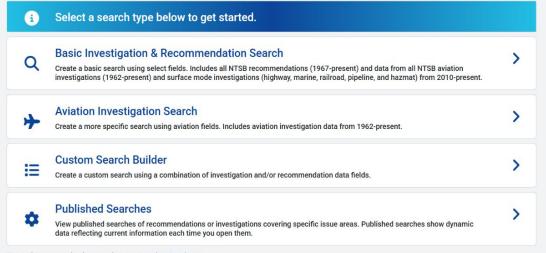






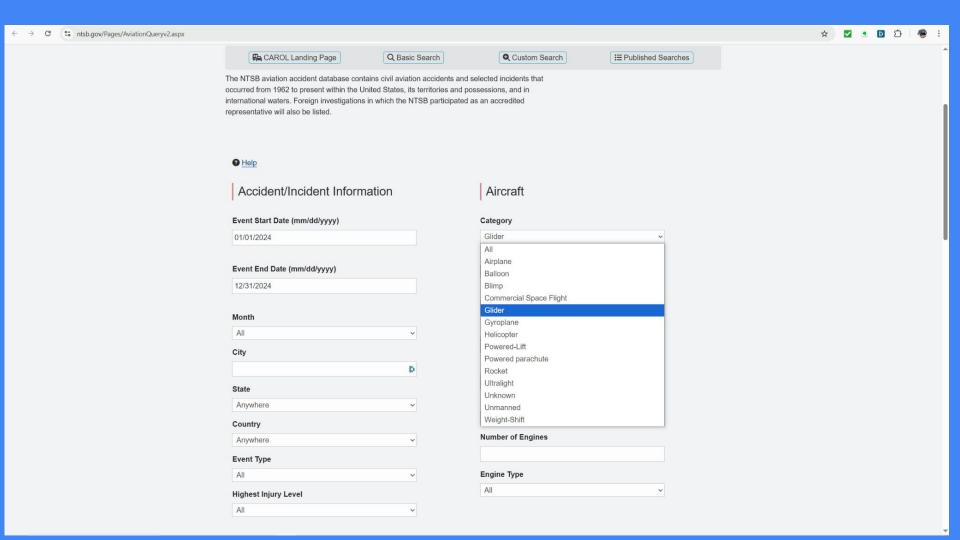
#### Welcome to CAROL

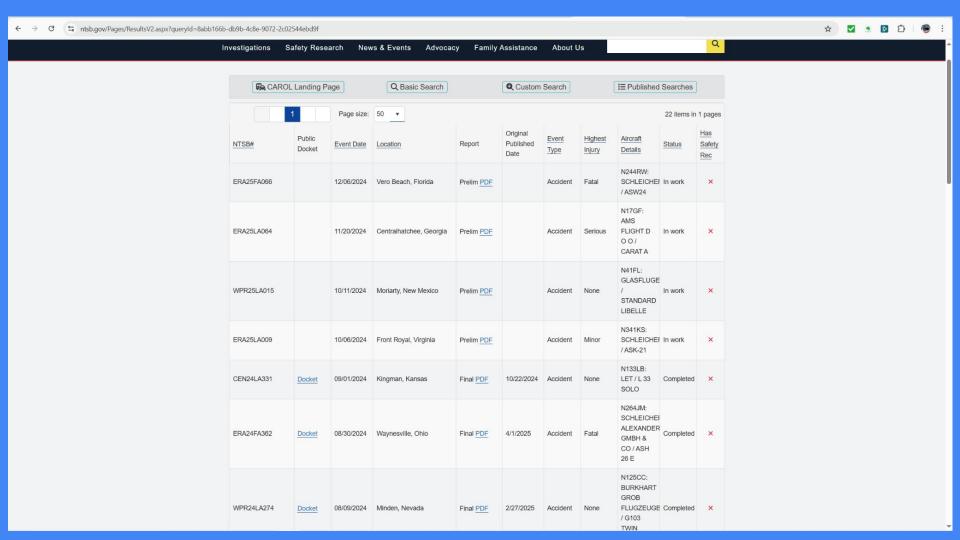
CAROL is NTSB's query tool for information about investigations and recommendations.



For assistance conducting searches, contact data@ntsb.gov. For assistance with or questions about CAROL, contact safti@ntsb.gov.

Additional Resources





### What is an Accident vs Incident?

Aircraft accident means an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.

*Incident* means an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

Reported to NTSB, not FAA



#### NTSB Updates Accident Reporting System

Direct digital submission now possible.



MEG GODLEWSKI Updated Apr 1, 2025 2:05 PM EDT



The NTSB has replaced the lengthy PDF that had to be emailed with a secure online portal. [Shutterstock/T. Schneider]



#### **Related Stories**



AIRCRAFT FOR SALE TOP PICKS This 2021 Cessna 525 Citation M2 Is a Right-Size, Single-Pilot 'AircraftForSale' Top Pick

FLYING STAFF

JACK DALEO

**FAA Boosts Support for** Controllers at Reagan National Airport

## 49 CFR PART 830—NOTIFICATION AND REPORTING OF AIRCRAFT ACCIDENTS OR INCIDENTS AND OVERDUE AIRCRAFT, AND PRESERVATION OF AIRCRAFT WRECKAGE, MAIL, CARGO, AND RECORDS

§ 830.1 Applicability.

§ 830.2 Definitions.

Subpart B-Initial Notification of Aircraft Accidents, Incidents, and Overdue Aircraft

§ 830.5 Immediate notification.

§ 830.6 Information to be given in notification.

Subpart C—Preservation of Aircraft Wreckage, Mail, Cargo, and Records

§ 830.10 Preservation of aircraft wreckage, mail, cargo, and records.

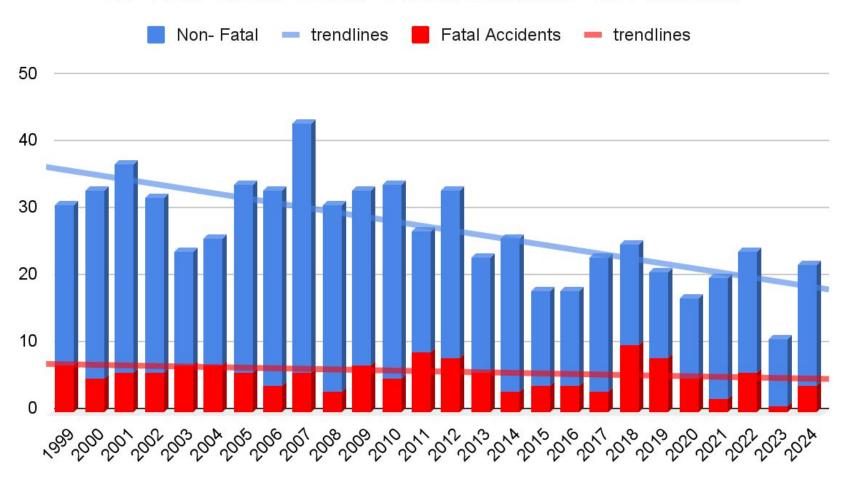
Subpart D—Reporting of Aircraft Accidents, Incidents, and Overdue Aircraft

§ 830.15 Reports and statements to be filed.

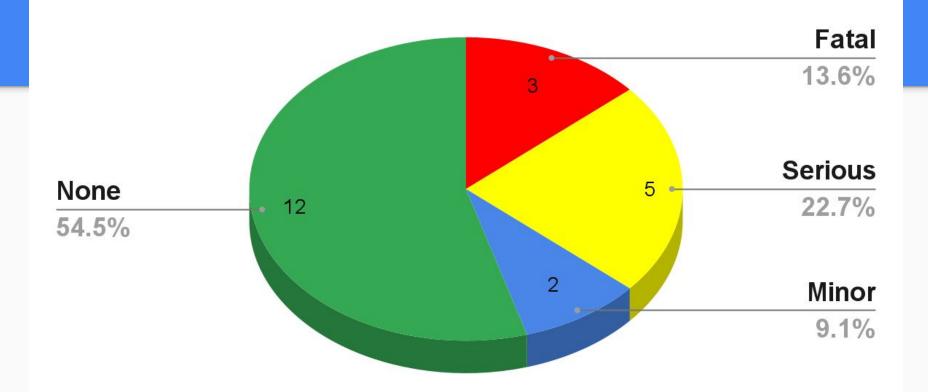
## In 2024 22 total glider accidents reported to the NTSB

3 of which resulted in fatalities

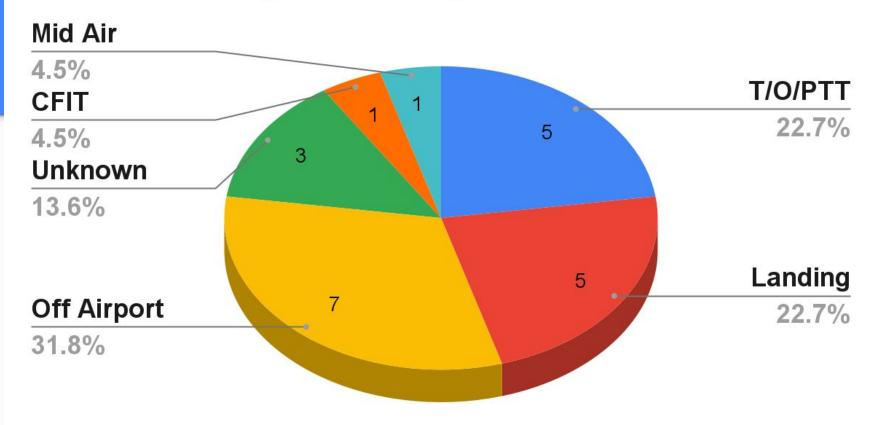
#### 25 Year Glider Data: Total Accidents vs Fatalities



#### 2024 Glider Accidents: Highest Injury Level



#### 2024 Accidents by Phase of Flight



### Weather

Only 1 involved significant weather; this had no injuries.

Off airport landing elected as weather deteriorated with blowing desert wind/sand in a light glider (Libelle) Winds were 22G31 kts nearby.

All the rest of the accidents occured in what we'd consider good/reasonable soaring weather.



### Phase of Flight: Take off/ PTT

### Take Off/ Premature Termination of Tow

- Automobile tow of a 2-33 utilizing a CG hook; rolled left and contacted ground
- 2. Motorglider engine failure on T/O; overshot RW landed in hilly terrain
- 3. Homebuilt Motorglider engine failure on T/O stall/spin Fatal
- 4. Normal T/O until about 150' AGL "radical pitch up" stall/spin Fatal

### Take Off/ Premature Termination of Tow

5. Towplane lost power on T/O roll, landed straight ahead glider didn't release and rope pulled glider into ground.



### Take Away Thoughts

Takeoffs are optional...

The release is your friend if ANY abnormalities

Checklists for assembling and pre takeoffs

Consider Emergency plan for runway/winds

Can all controls be easily reached and activated?



### Phase of Flight: Mid-Air Collision

### Mid-Air

Pilot 1 only saw glider 1.5 seconds prior to impact tried to turn away but raised wing struck. This glider had FLARM

Pilot 2 never saw the other glider until wings struck

Both maintained controllability and landed safely.



- Pipistrel Glider with Damaged Left Wing (Courtesy of FAA)



### Phase of Flight: Landing

### Phase of Flight: Landing/Off Airport

Often the reports begin with "encountered heavy sink"

Arrived at intended landing airport lower than expected

Or forced to use alternate landing surface

### Phase of Flight: Landing

- 1. Unstable Approach/Indecision
- 2. Gusty conditions, narrow runway wing struck tall grass
- 3. Forgot to dump H20 (rarely flew with ballast) got too slow for weight landed hard
- 4. Witness stated glider appeared too slow, stalled/spin recovered about 50' AGL then abruptly pitched up and stalled Fatal

### Phase of Flight: Landing - Off Airport

- 1. Struck fence post
- 2. Struck rock
- 3. 2 instances of Motor Gliders- not enough altitude to start motors; forced landing
- 4. Motorglider under power engine quit after 1 hr, forced landing flipped over
- 5. Desert sandstorm
- 6. Fixated on a tree in approach path stalled

### Phase of Flight: Landing

Student pilot about 25 glider hours

Landing runway 18 winds 210@12 G 22

Staged glider on RW 18 approx 1,500 ft from beginning

Set up for landing on turf adjacent to RW; Instructor in staged glider radioed to "land short" This created confusion in landing student's mind

H71: MID-AMERICA INDUSTRIAL PRYOR, OKLAHOMA, UNITED STATES A1 81 A2 Approximate accident location of glider A3 Witness location of glider/ towplane staged on runway First intended landing area A4 36 A5

### H71

https://www.google.com/maps/@36.2261614,-95.3307455,1719m/data=!3m1 !1e3?entry=ttu&g\_ep=EgoyMDI1MDMzMS4wIKXMDSoJLDEwMjExNDUzSAFQA w%3D%3D

### **CFIT**

Very close to home, a good friend of NESA

Had a good soaring flight but lift subsided and he headed home

Struck a tree on hill and "landed" about 30 ft above the ground in the trees

About 5 hours until first responders located him.



Photograph 1 - Drone image of glider in tree canopy (Courtesy of FAA)



### Take Away Thoughts

Are you arriving with enough reserve to land at the airport?

Careful evaluation of alternate landing sites

Awareness of obstacles?

Is your final touchdown speed proper?

### Take Away Thoughts...

Hone your landing skills with an instructor.

Practice "alternative" patterns: right patterns, abbreviated patterns;

Practice minimum energy touchdowns and maximum performance stops.

### Should you be involved in an "event"...

Emergency care/safety

Review the NTSB requirements (49 CFR Part 830) make reports if required

File "NASA" Report

Contact a flight instructor or a FAASTeam Rep to discuss the event

Get dual instruction with an instructor

### We are all human...

Any one of us is capable of making mistakes and having a bad day.



### Before you fly

Please Think...



### Questions?

gsmithdmd@comcast.net

