



NTSB

National Transportation Safety Board

General Aviation Safety Status and Challenges



NTSB General Aviation
Safety Seminar
December 7, 2013

Earl F. Weener
Member, NTSB

NTSB Mission

The NTSB is an independent US federal agency charged with determining the probable cause(s) of transportation accidents, making recommendations to prevent their recurrence, conducting special studies and investigations, and coordinating resources to assist victims and their families after an accident.

NTSB “Air Force”

- Built/Restored or Building/Restoring*
- **Sheryl Chappell:** Cessna 180 Floatplane
- **John Clark (EAA #603773):** Schreder RS-15, Vans RV-9A, Vans RV-12
- **Paul Cox:** Beech Bonanza G33, Vans RV-8a (Building)
- **Dennis Crider (EAA #1041658):** Vans RV-12
- **Dennis Diaz (EAA #1047382):** Vans RV-7a
- **Craig Hatch (EAA #659495):** Vans RV-8a, Cessna 140
- **Tom Haueter (EAA #251921):** 1943 Stearman, 1934 Lockheed Altair
- **Tim LeBaron (EAA #454270):** Piper J-3, Breezy (experimental), Pober Jr. Ace, 1941 Piper J5A, 1946 Cessna 120, 1975 Cessna 150, 1946 Ercoupe, Vans RV-4, 1947 Piper PA-11 Cub Special
- **Larry Lewis (EAA #751909):** Varga Kachina 2150A, Vans RV-8
- **Ron Price:** 1972 McCollough J2, Long EZ
- **Elliott Simpson:** Vans RV-7, Pietenpol Aircamper
- **Bob Swaim (EAA #221919):** 1974 Beech Sport, 1947 Cessna 140, 1967 Cessna 150, 1941 Stinson 10A, Kitfox
- * At least one airplane listed was built/restored or is in the process of being built/restored.

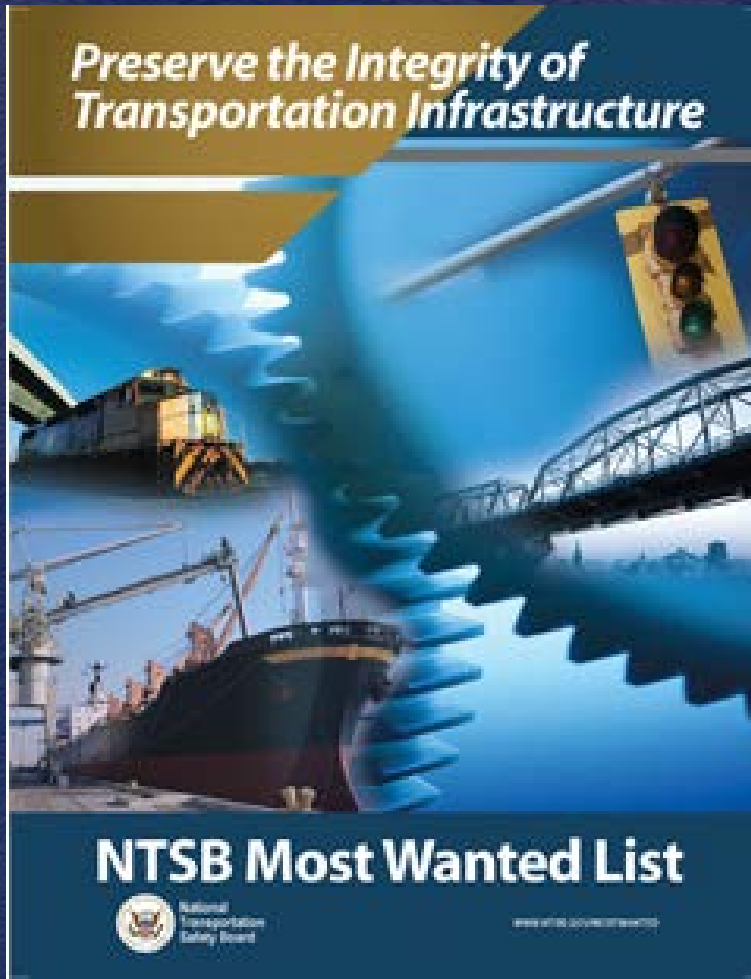
NTSB “Air Force”

- Own (Not Built/Restored)
- **Member Earl Weener (EAA #727429):** Beech Bonanza B36TC
- **Kurt Anderson:** Navion, Aeronca 11AC, Cessna 170A
- **Tim Burtch (EAA #1078661):** Cessna 172
- **John Brannen:** Sonerai IIL
- **Evan Byrne:** Cessna 172
- **Jill Demko:** PA-22-108 Piper Colt
- **J. Michael Duncan:** Beech Bonanza V35B
- **Kristi Dunks (EAA #689578):** 1955 Piper Super Cub
- **Catherine Gagne (EAA #646357):** 1956 Beech Bonanza G35
- **Craig Hatch:** Cessna 170a
- **Mike Huhn:** Cessna 182
- **Judge William Mullins:** Vans RV-8a
- **Jose Obregon:** Cessna 172
- **Jim Ritter:** Piper Comanche
- **Chris Stephens (EAA #689593):** Piper Comanche

N6529R - B36TC Bonanza



NTSB Most Wanted List

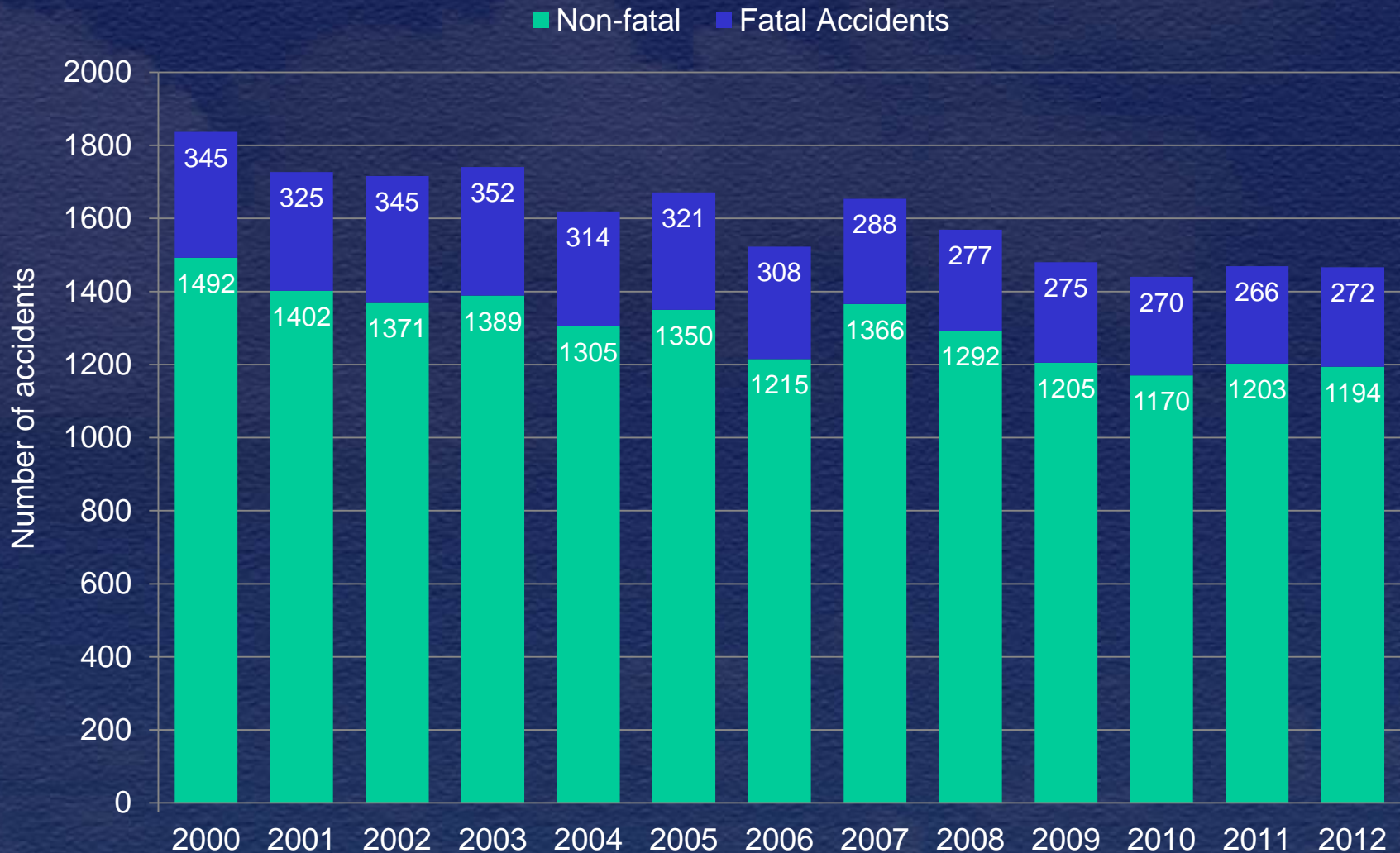


- Improve general aviation safety
- Improve safety of airport surface operations
- Eliminate distraction in transportation
- Preserve the integrity of transportation infrastructure
- Improve fire safety in transportation
- Enhance pipeline safety
- Implement positive train control systems
- Improve the safety of bus operations
- Eliminate substance-impaired driving
- Mandate motor vehicle collision avoidance technologies

Why GA on the Most Wanted List?

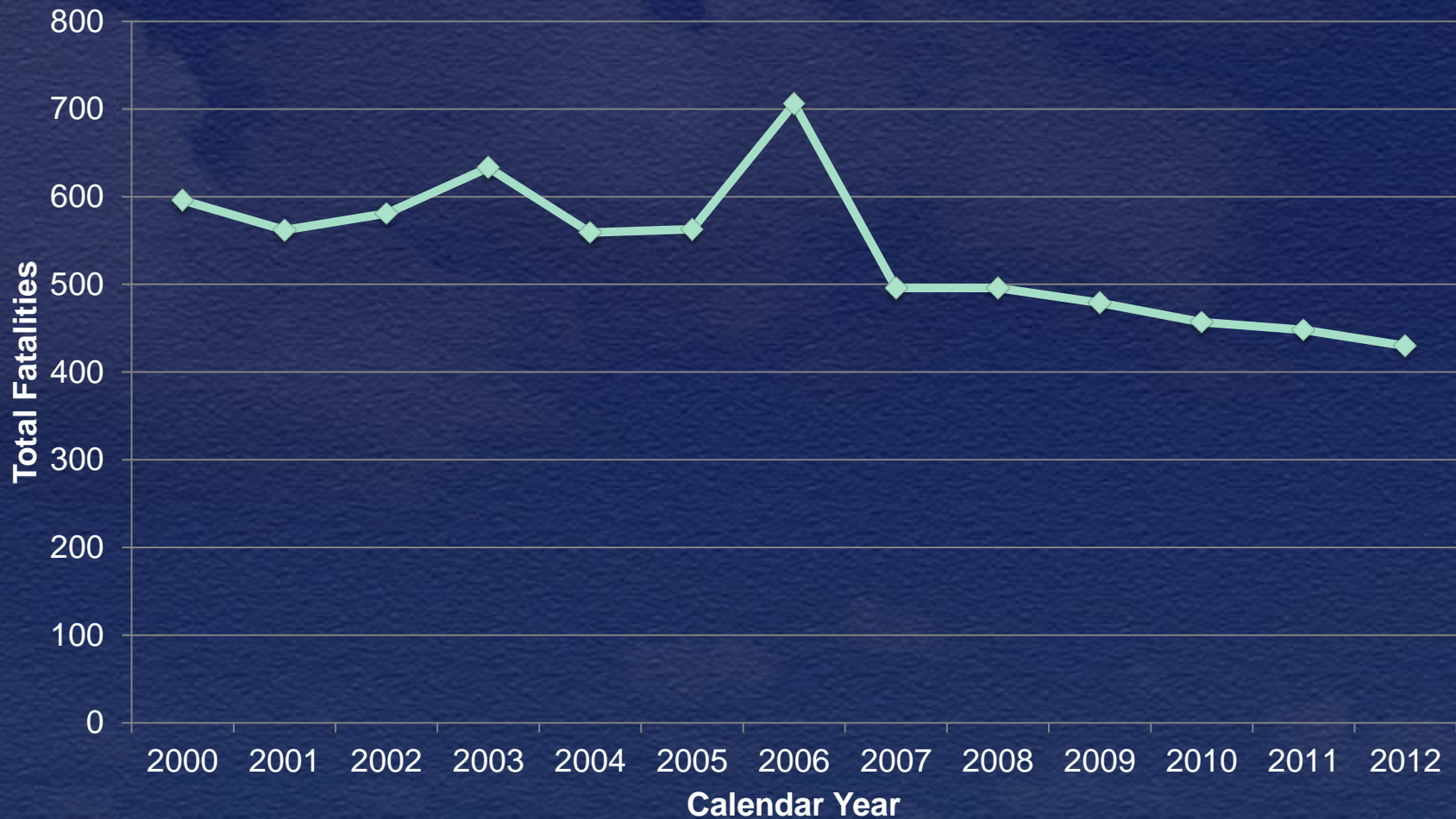
- NTSB investigates approximately 1500 GA accidents per year
- Overall GA accident rate flat
 - Has not improved over the last ten years
 - Air carrier accident rate decreased almost 80%
- Personal flying accident rate
 - Increased 20% over last 10 years
 - Fatal rate increased 25% over that period
- **GA safety needs attention**

All GA Accidents

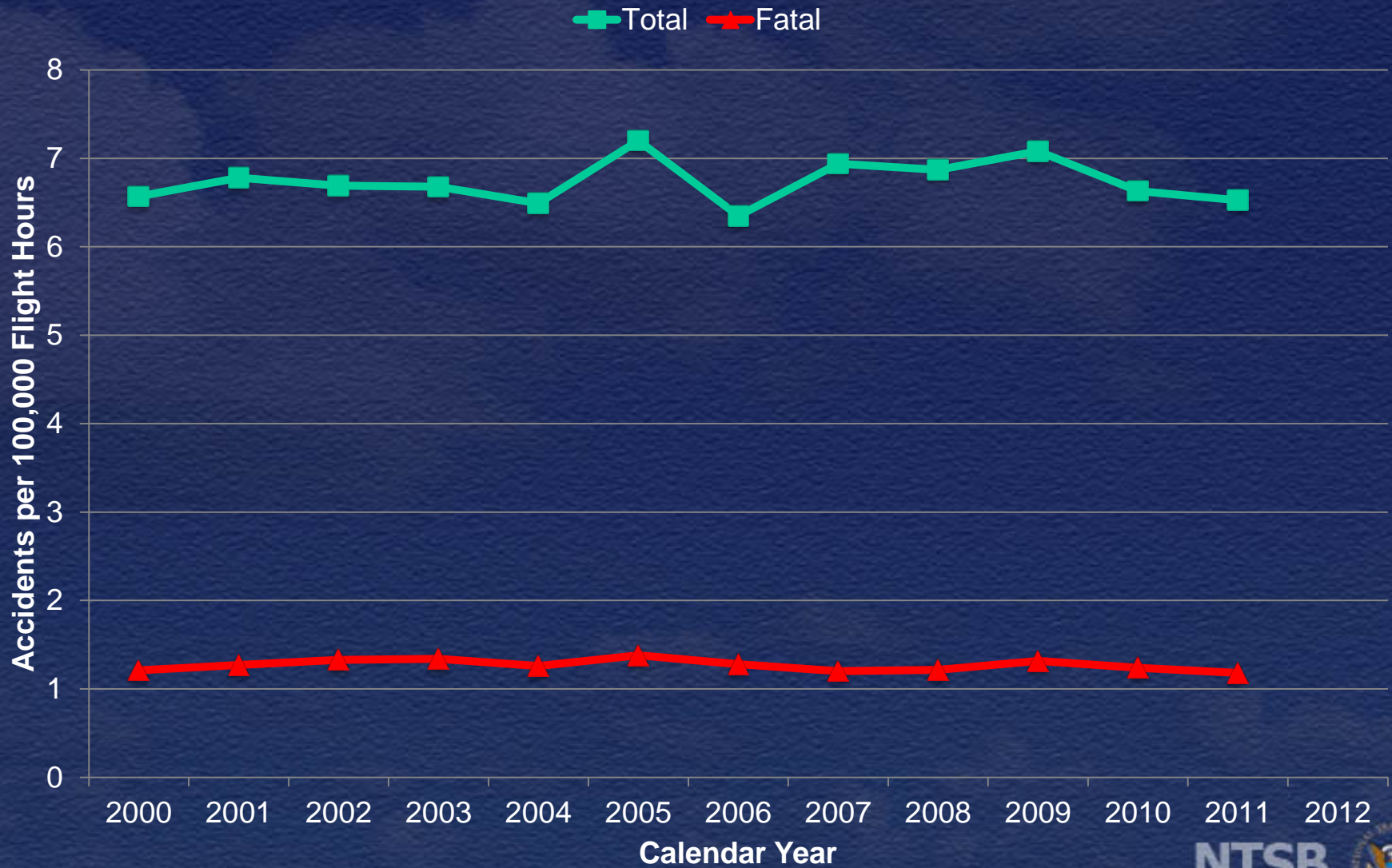


GA Accident-involved Fatalities

GA Accident-Involved Fatalities



GA Accident Rates



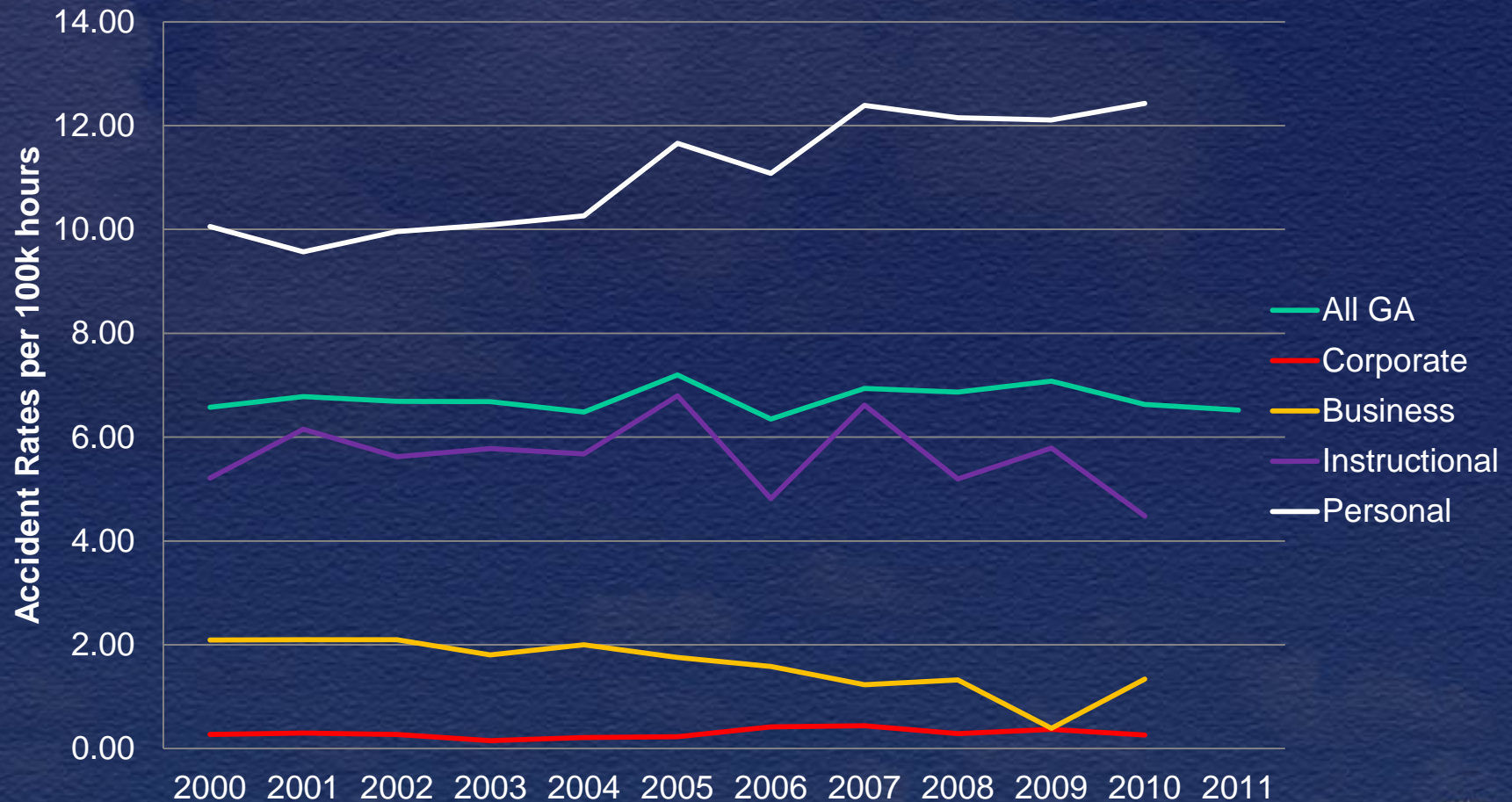
Defining Fatal Accident Events

All GA 2008-2012

- Loss of Control in Flight
- System/Component Failure – Powerplant
- Controlled Flight into Terrain
- Collision with Terrain/Object (non-CFIT)
- VFR Encounter with IMC
- System/Component Failure –
Non-Powerplant

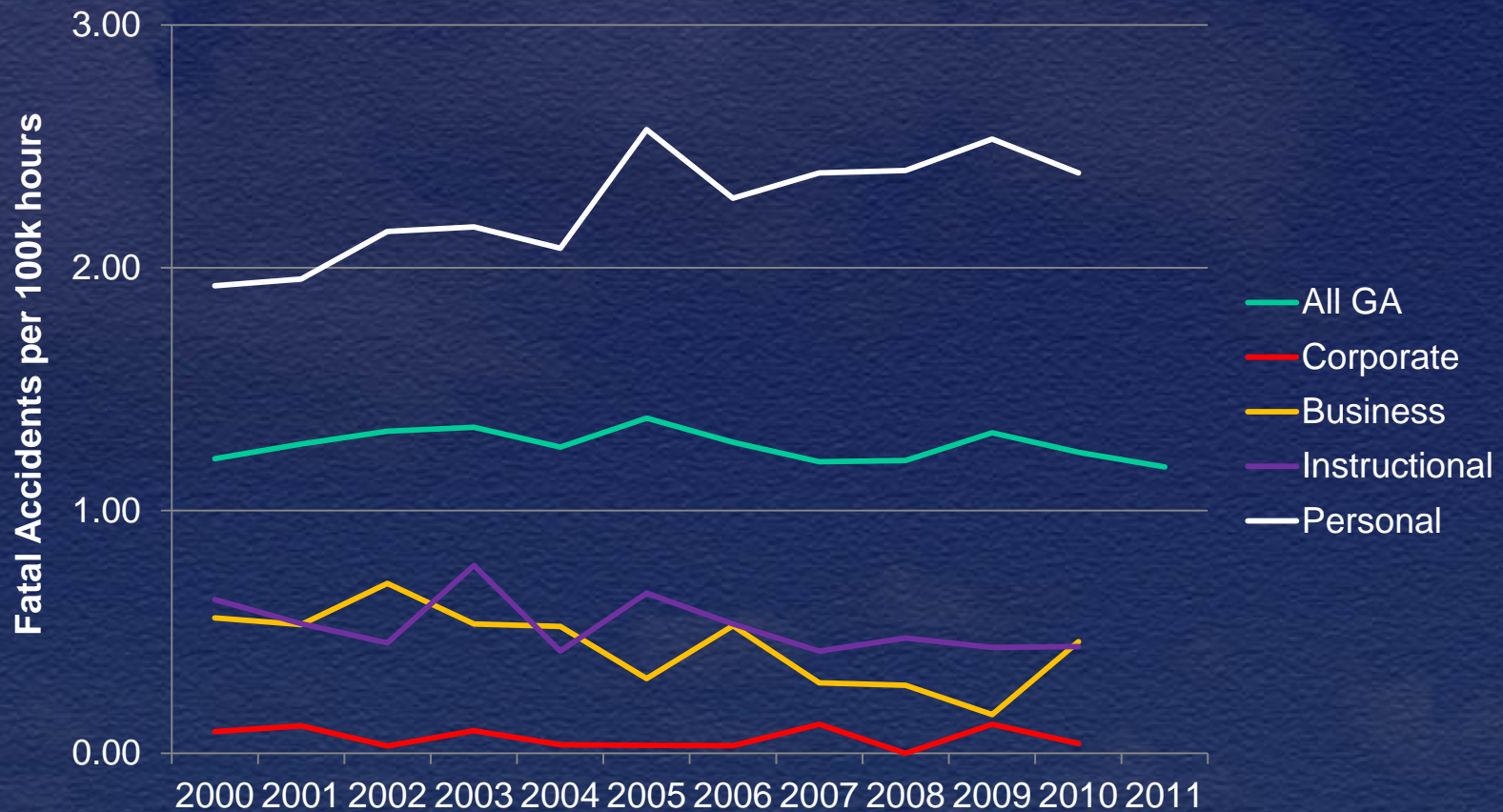
Accident Rates per 100k Flight Hours

Accident Rates per 100k Flight Hours
2000-2011



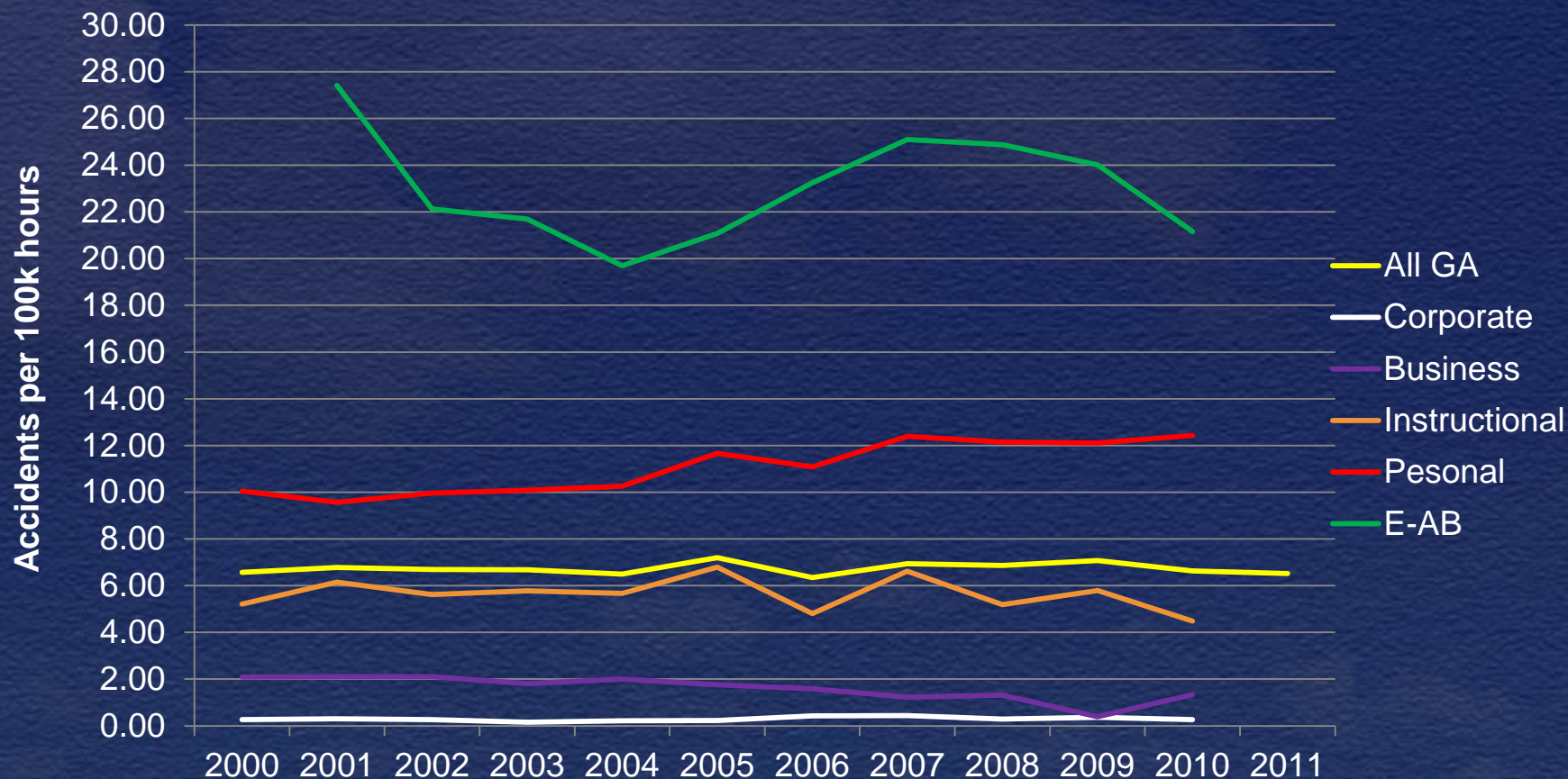
Fatal Accident Rates per 100k Flight Hours

Fatal Accident Rates per 100k Flight Hours
2000-2011



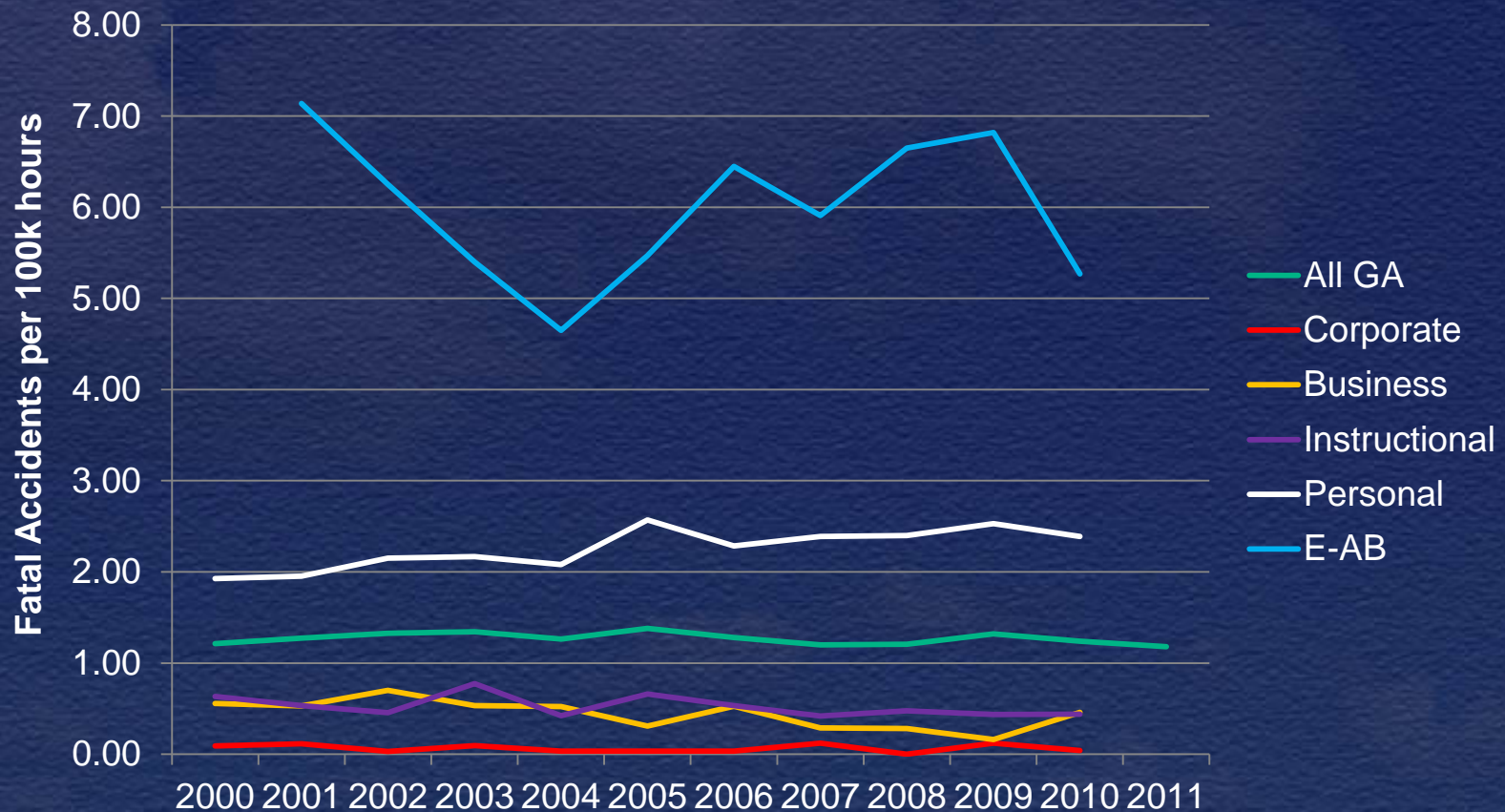
Accident Rates per 100k Flight Hours

Accident Rates per 100k Flight Hours
2000-2011



Fatal Accident Rates per 100k Flight Hours

Fatal Accident Rates per 100k Flight Hours
2000-2011



Accident Rates, 2000 - 2011

- Corporate
 - Accident rates approaching that of the airlines.
- Business
 - Total and fatal accidents relatively flat; substantially below the overall GA accident rates.
- Instructional
 - Total accident rate is slightly below the average for all of GA, the fatal rate is substantially lower.
- Personal
 - Total and fatal accident rates have risen, both rates are substantially above the average of all GA flying.

Business Flying, 2008-2012

All accidents – Loss of control (in-flight or on the ground) accounted for the largest portion, followed by system/component failures.

Fatal accidents - Loss of control in flight accounted for the greatest proportion, followed by controlled flight into terrain.

Number of Fatal Accidents

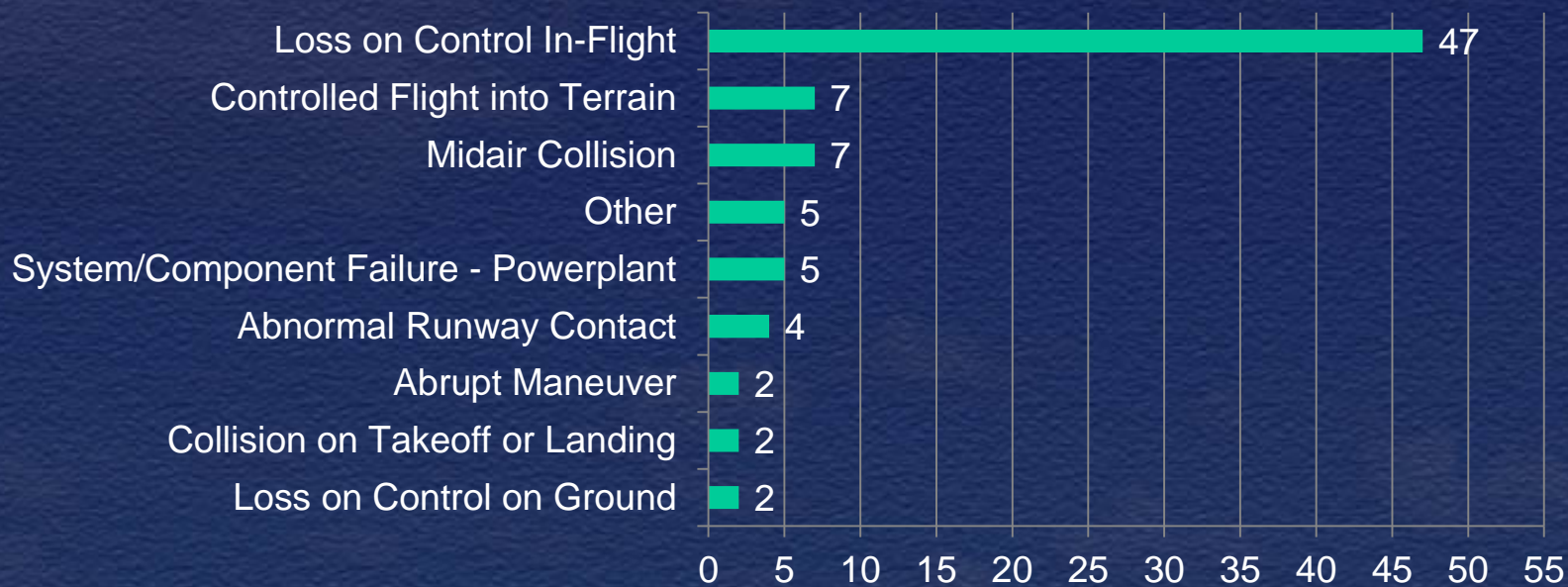


Instructional Flying, 2008-2012

All Accidents - Loss of control on the ground or in-flight and abnormal runway contact accounted for the great majority of defining accident events.

Fatal Accidents – Loss of Control in-flight, followed by Controlled Flight into Terrain.

Number of Fatal Accidents

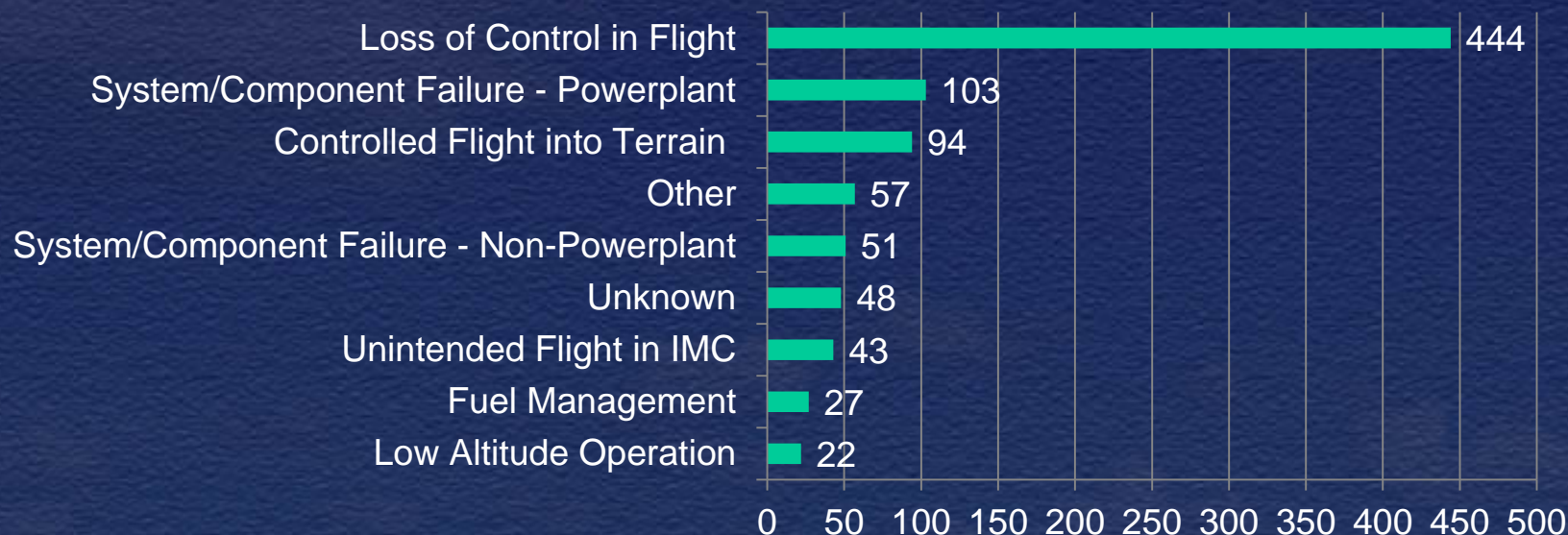


Personal Flying, 2008-2012

Total accidents - loss of control in flight and on the ground and power plant failure were the most common defining events.

Loss of control in flight accounted for the greatest proportion of the fatal personal flying accidents.

Number of Fatal Accidents



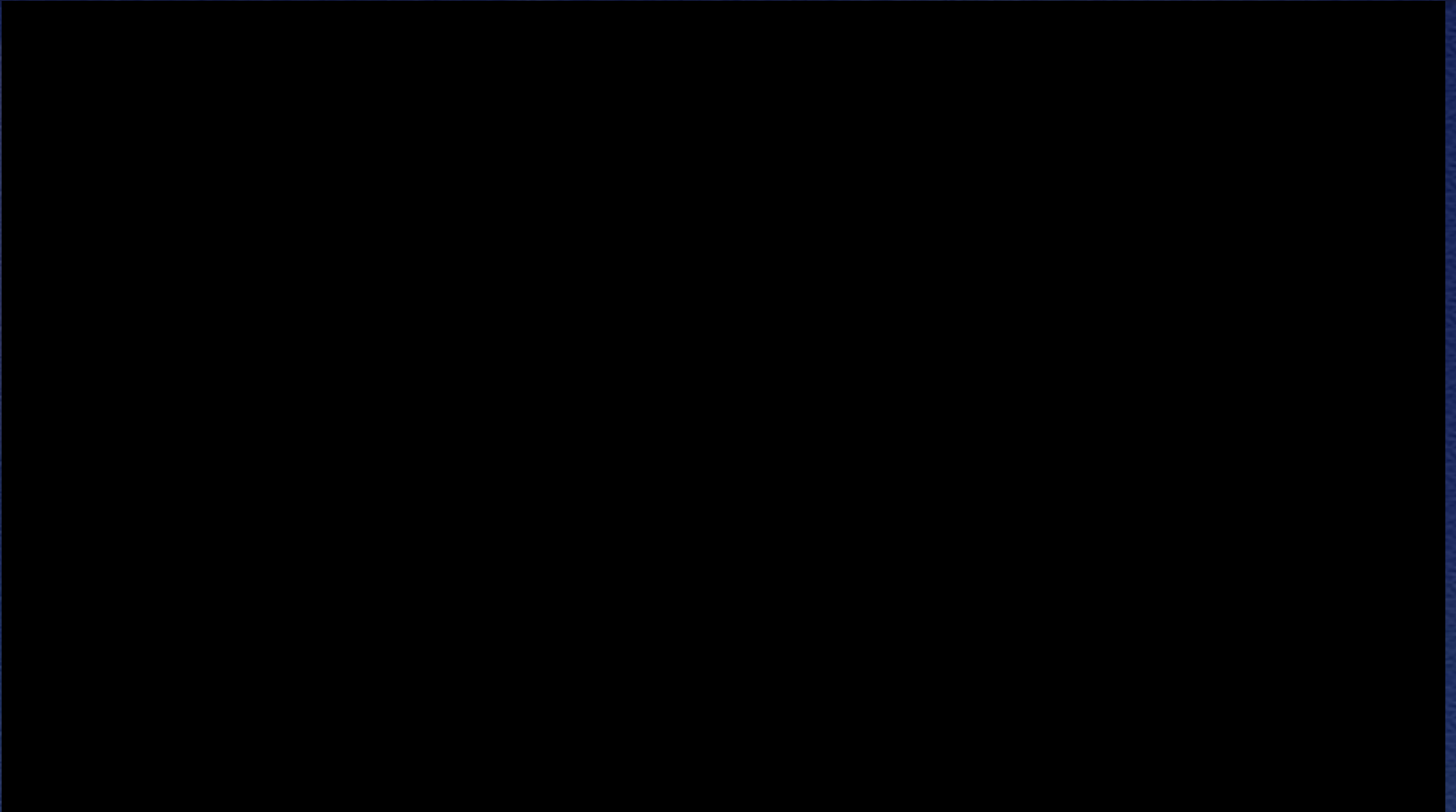
NTSB Safety Alerts

- Preventing Aerodynamic Stalls
- Reduced Visual References
- Is Your Aircraft Talking to You
- Risk Management for Pilots
- Risk Management for Mechanics



Available on www.NTSB.gov

Safety Alert Video Preview



Reduced Visual References

- Preflight weather briefing
- Resist external pressures
- Honestly assess your skills
- Know your equipment
- Seek help from ATC
- Understand challenges of night flying
- Manage distractions

Alfred Sheinwold

“Learn all you can from the mistakes of others. You won’t have time to make them all yourself”

You can try this at home



- NTSB accident files are on-line
- Many recent accident Dockets are on-line
 - Factual reports,
 - Interviews
 - Photographs
- www.nts.gov

<http://www.nts.gov/doclib/reports/2011/ARA1101.pdf>

Douglas Adams

“Human beings, who are almost unique in having ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so.”



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