



**National
Transportation
Safety Board**

NTSB Investigation Process & the Party System

Tour Operators Program of Safety
Helicopter Tour Operators Committee
October 25, 2018
Long Beach, California

Stephen Stein
Air Safety Investigator
Federal Way, Washington

What we will cover...

- The Function of the NTSB
- Agency Breakdown
- Defining an Accident
- The Accident Investigation Process
- NTSB Party System
- What to do if your company is involved in an accident



Stephen Stein

- Background
 - NTSB Air Safety Investigator: 2012 – Present
 - Various Flight Schools/Part 135 Ops: 2009 - 2012
 - Law Firm Manager: 2007 – 2009
 - Law Clerk/Paralegal: 2005 – 2007
- Education
 - MS, Safety Science
 - Embry-Riddle Aeronautical University – Prescott, AZ
 - AS, Aviation Maintenance
 - Embry-Riddle Aeronautical University - Worldwide
 - BA, Legal Studies
 - University of San Francisco
 - Private Pilot, Instrument



The NTSB Mission

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating **every civil aviation accident** in the United States and **significant accidents in the other modes** of transportation -- railroad, highway, marine and pipeline -- and **issuing safety recommendations** aimed at preventing future accidents.



Mission Breakdown...

- Title 49 CFR Parts 830 & 831
- Independent federal agency
- Investigate every civil accident in the U.S.
- Understand the facts, conditions, and circumstances for each accident
- Issue safety recommendations



The NTSB Mission - Breakdown

The NTSB is additionally charged with:

- Making recommendations to prevent future accidents
- Conducting special studies and investigations
- Coordinating resources to assist victims and their families after an accident
- Court of Appeals (ALJ) for airmen, mechanics, and mariners with certificate actions against them



Structure of the NTSB

- The NTSB is comprised of 5 Board Members, appointed by the President, and confirmed by the Senate.
- Members serve 5-year staggered terms



The NTSB Mission – Personnel & Workload

Alaska



Anchorage

Western



Federal Way, WA

Central



Denver

Eastern



Ashburn, VA

Agency:

- 415 Employees
- OAS – 120 Investigators
- 1,500 accidents per year total

Regions:

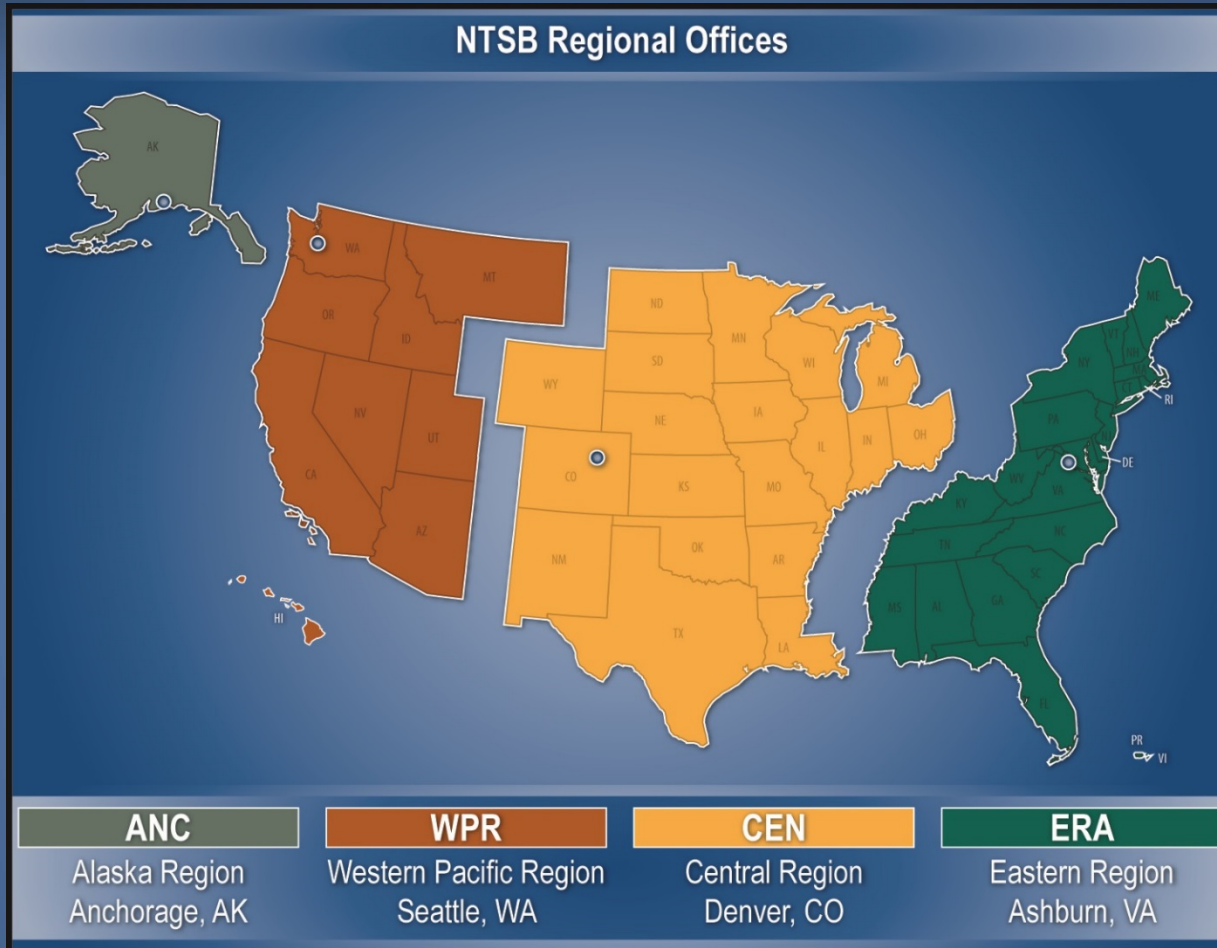
- 47 Investigators
- 1,200 accidents per year
- On-call 24/7/365

NTSB HQ



NTSB

Regional Offices



Notification & Reporting (§830.5)

The operator of an aircraft shall **immediately** and by the ***most expeditious means available*** notify the nearest NTSB Field Office when an ***aircraft accident*** or any of the following ***incidents*** occur:

- Flight control system malfunction
- Inability of any crew member to perform normal flight duties as a result of injury or illness
- Internal turbine engine failure (uncontained)
- In-flight fire
- Aircraft collision in flight



Notification & Reporting

- Continued...
 - Damage to property >\$25,000
 - Release of propeller blade (excluding ground contact)
 - Failure of 50% of EFIS, EICAS, PFD, PND..etc.
 - ACAS resolution advisory (RA) with risk of collision
 - **Damage to helicopter TR or MR blades (including ground damage)**



What is an accident?

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**



What is *serious injury* (§830.2)?

Any injury which:

- Hospitalization for more than **48 hours, within 7 days** of the date that the injury was received;
- **Fracture** of any bone (except simple fractures of fingers, toes, or nose);

Cont'd:

- Causes severe hemorrhages, nerve, muscle, or tendon damage;
- **Internal organ** or;
- **2nd or 3rd degree burns**, or burns affecting more than 5% of the body surface



What is *substantial damage* (§830.2)?

Substantial Damage is...

Damage or failure which:

- **Adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which;**
- **would normally require major repair or replacement of the affected component**

Substantial Damage is **not**...

- Engine failure or damage limited to an engine if only one engine fails or is damaged,
- Bent fairings or cowling
- Dented skin
- Small punctured holes in the skin or fabric
- Ground damage to rotor or propeller blades
- Damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered “substantial damage” for the purpose of this part.



NTSB

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What is an *incident*?

“An occurrence other than an accident associated with the operation of an aircraft, which affects or could affect the safety of operations.”

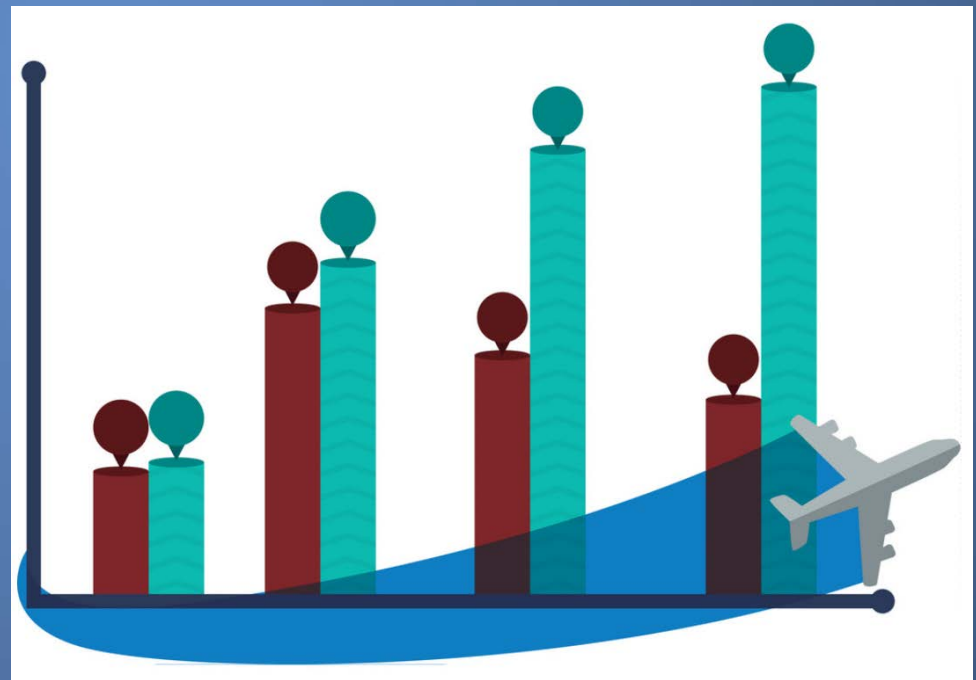
- 49 Code Federal Regulations 830.2



Rotorcraft Accident Rate

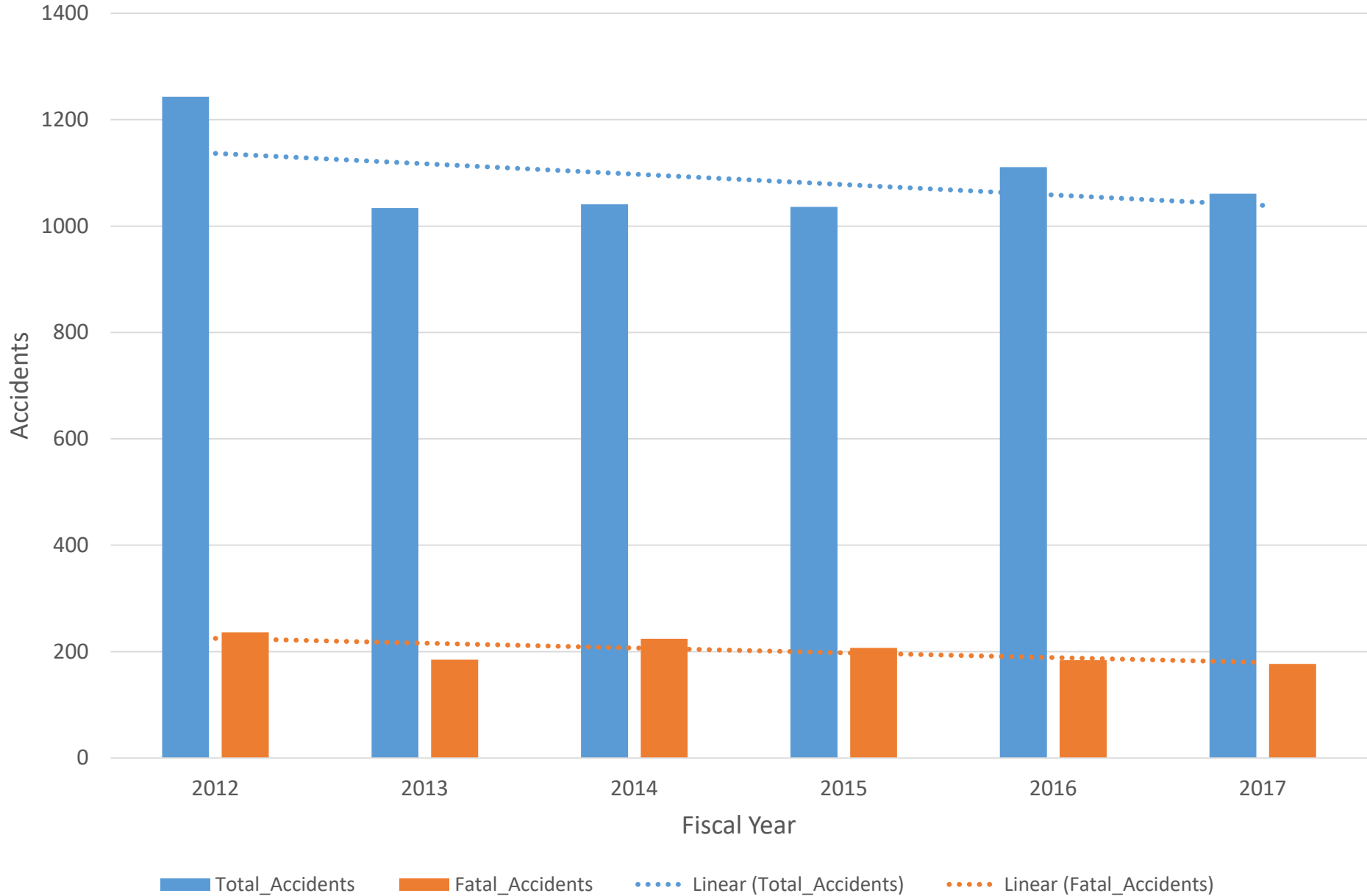
Data comes from FAA who compiles its data from...

- FAA activity surveys
 - For GA and non-scheduled Part 135
- Operators through DOT
 - For scheduled Part 135 and Part 121

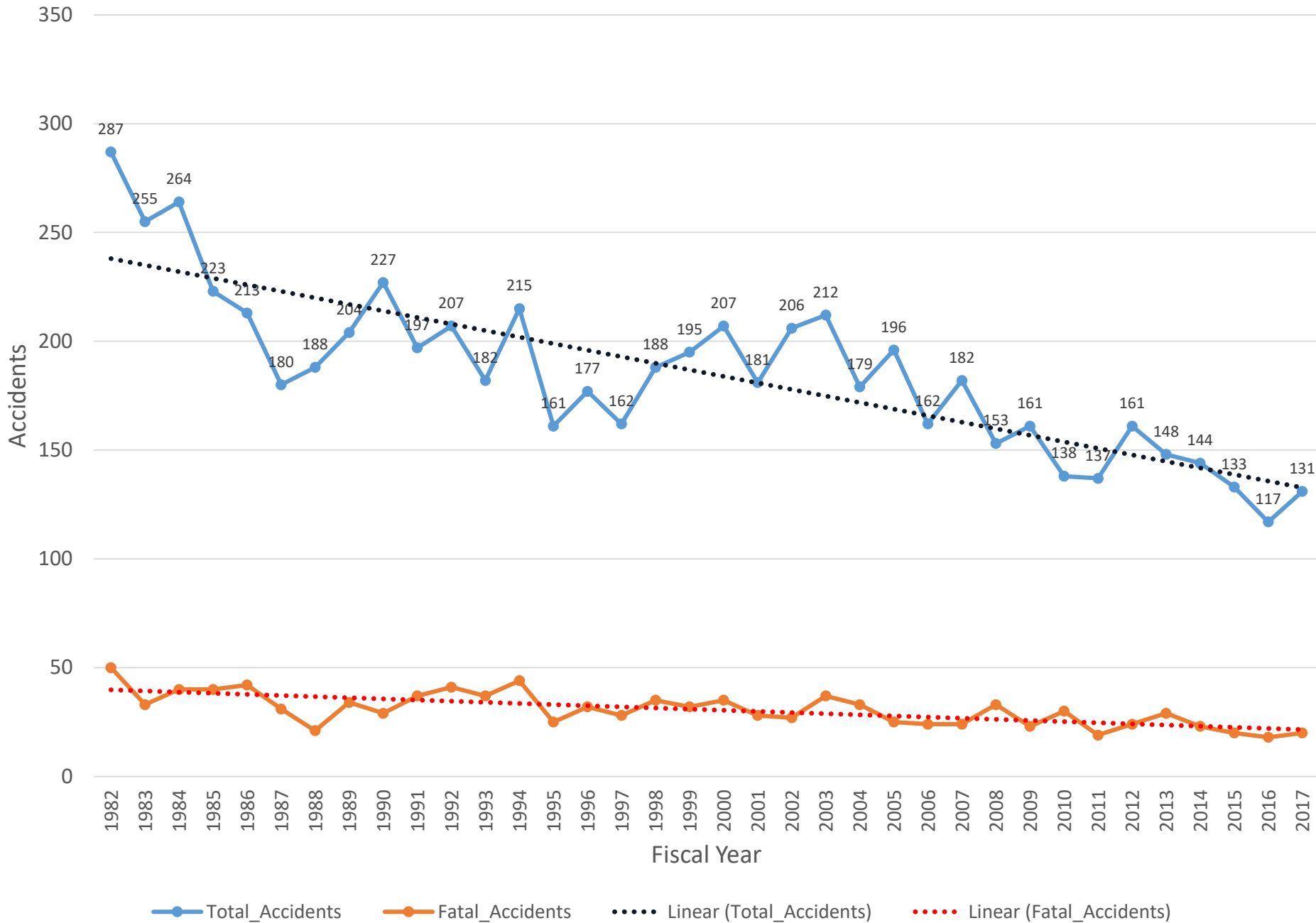


Total Accidents

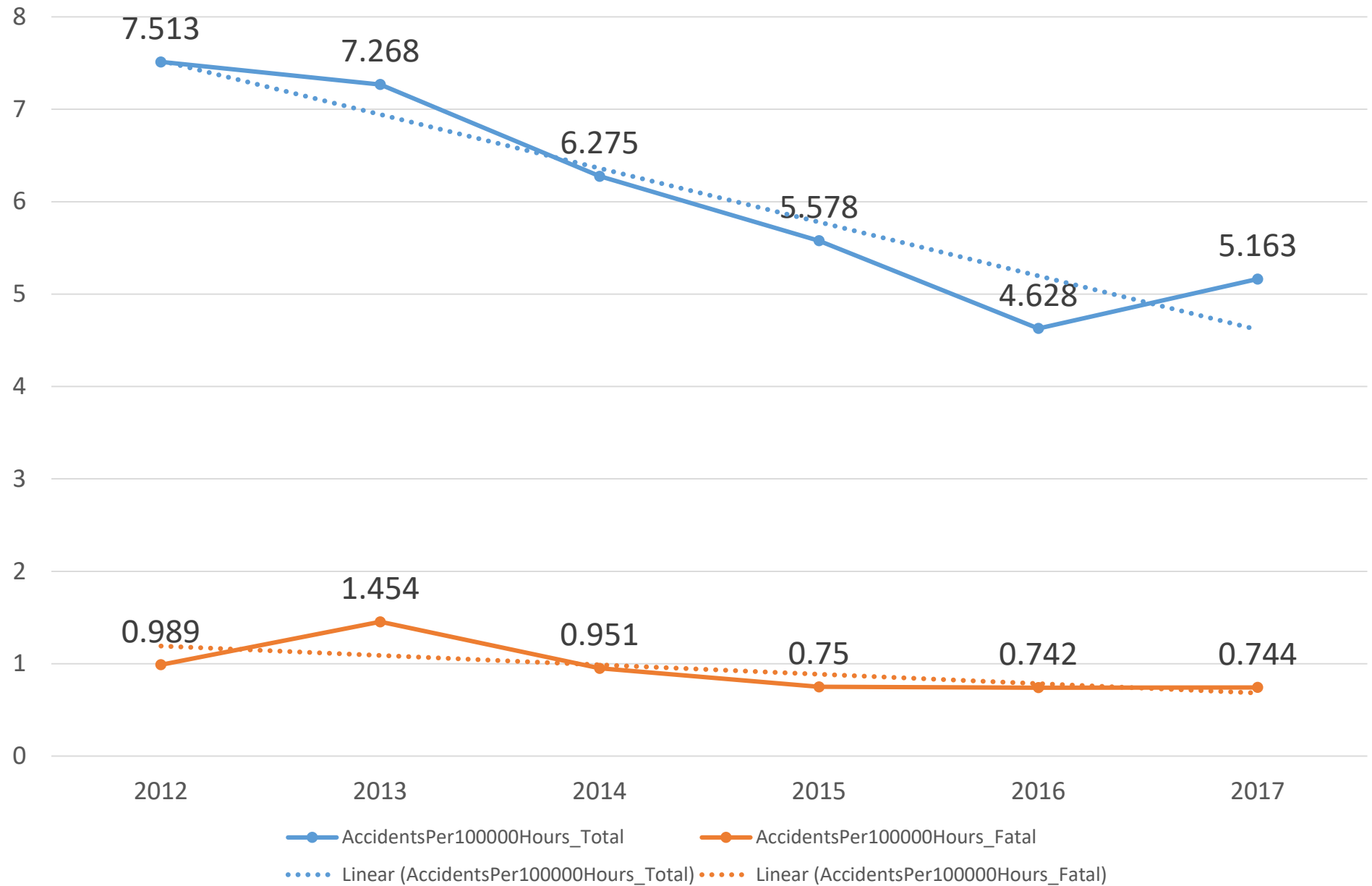
General Aviation - FY12 - FY17



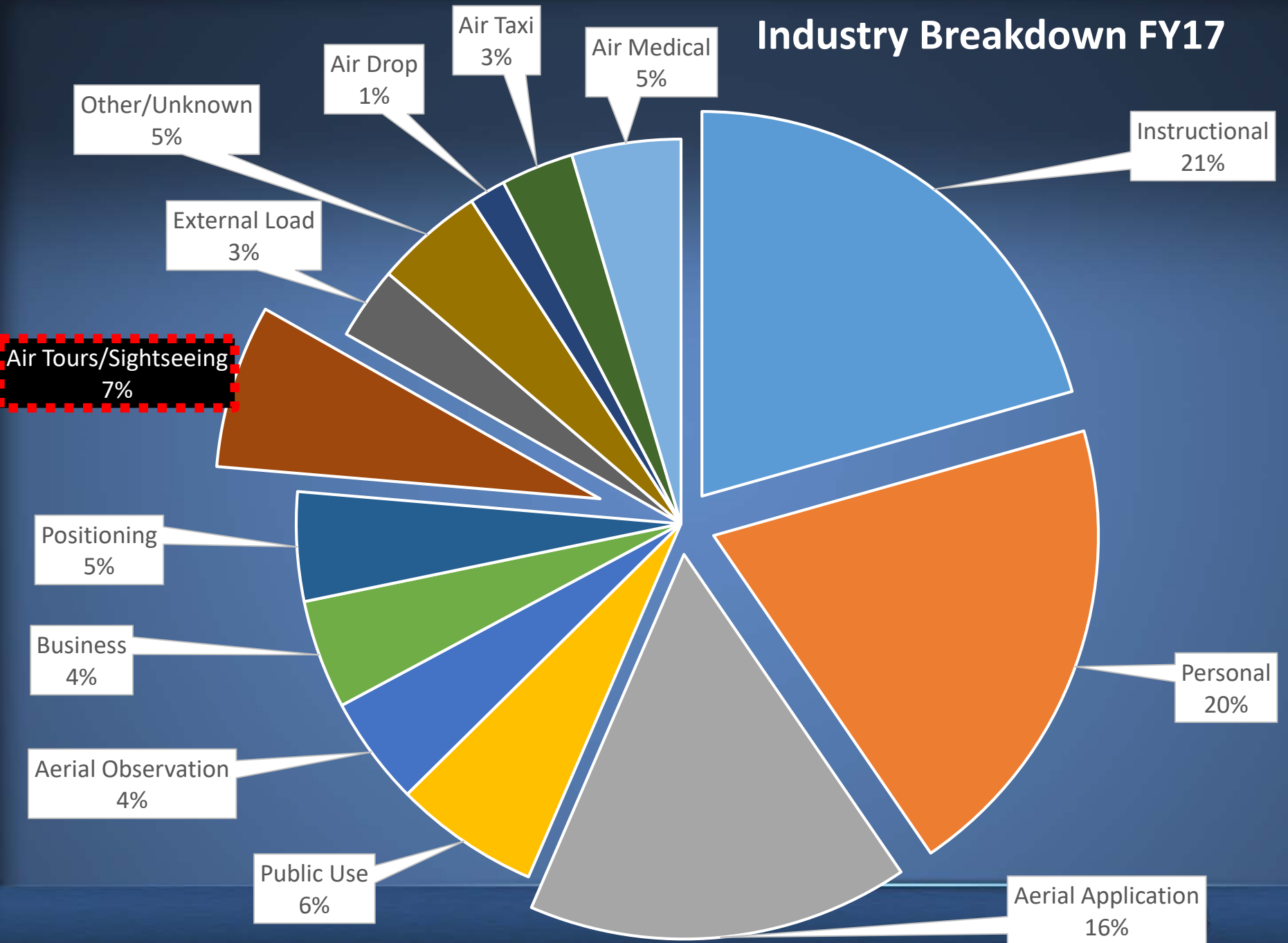
U.S. Registered Rotorcraft Accidents FY82 - FY17



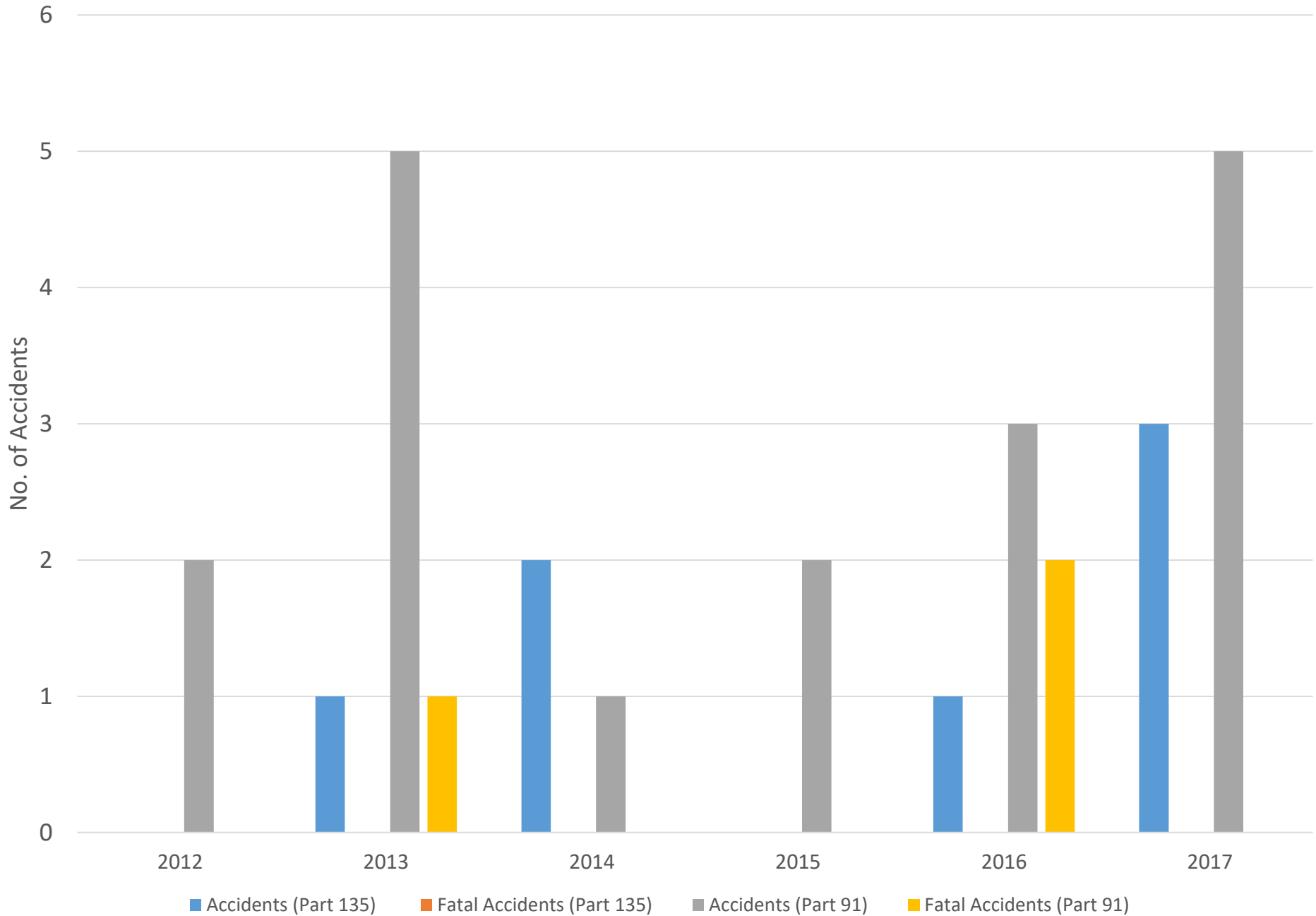
Rotorcraft Accident Rate (per 100,000 hours)



Industry Breakdown FY17



Air Tour Accident Rates (FY12 - FY17)



The Accident Investigation Process *Summarized*



NTSB

Accident Reporting

- Call 911
 - Law Enforcement will typically notify FAA Operations
- Notify NTSB HQ or the closest FAA Response Operations Center (just in case)
 - NTSB (202-314-6290)
 - FAA West (206-231-2099)



Preservation of Wreckage

- Operator is responsible for preserving wreckage and records (§830.10)
- Wreckage may not be disturbed unless:
 - To remove persons injured or trapped
 - To protect from further damage
 - To protect public from injury
- Before moving
 - Take photographs (if possible)



Triaging the Reported Event

NTSB's goal within the first hours of notification...

- Establish level of injury/damage
- Assess level of effort to contain event
- Categorize investigation



Classify Accident

- Field (FA) Investigations
- Limited (LA) Investigations
- Data Collection (CA) Investigations



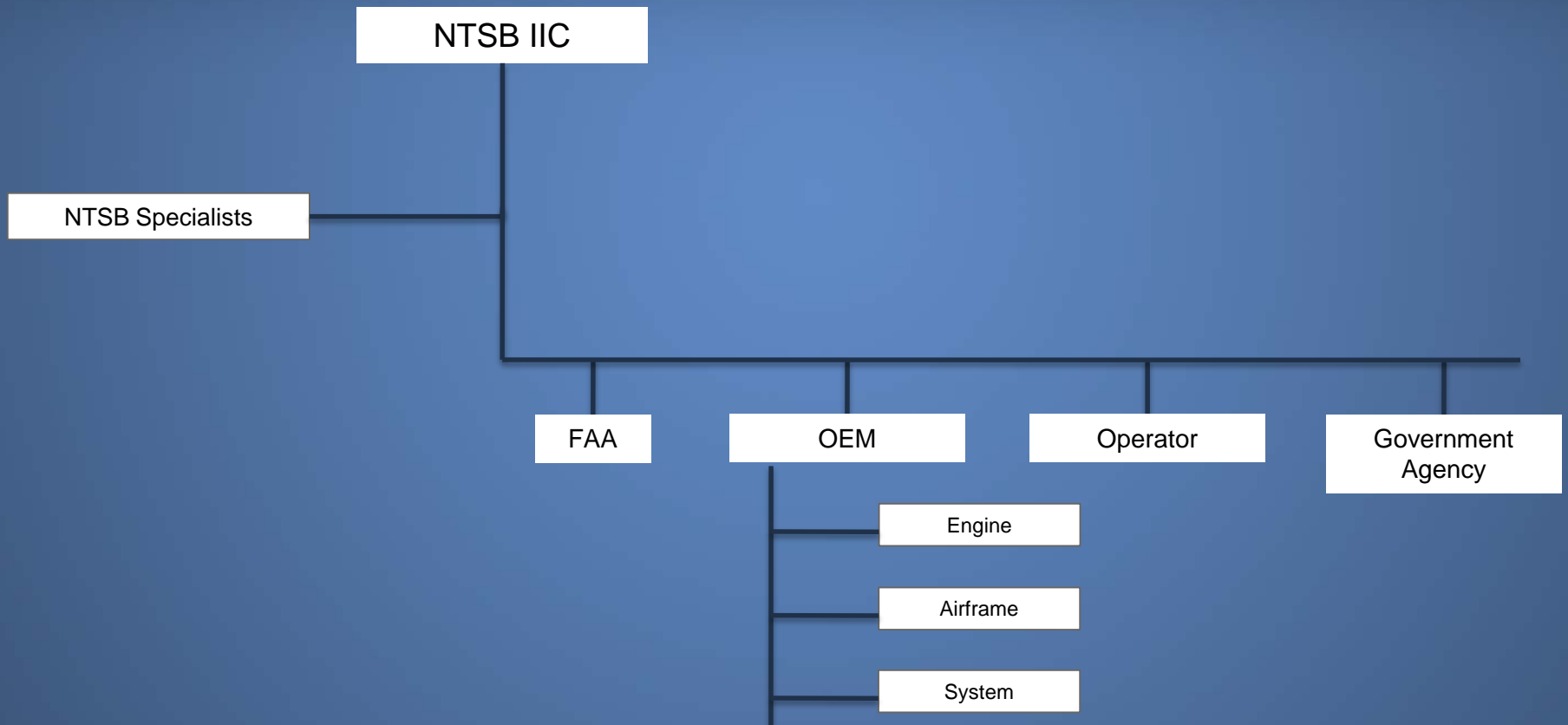
The Party System

What is the party system?

- Technical advisors to the investigation
- Allows government agencies, OEMs, and operators to participate in investigation
 - As parties, the investigative team can remediate safety hazards immediately



Organization Chart – Regional Investigation



The Party System

Who is party to an investigation?

“Parties shall be limited to those persons, government agencies, companies, & associates whose employees, functions, and activities, or products were involved in the accident and who can provide **suitable qualified technical personnel** to actively assist in the investigation”

- 49 Code Federal Regulations 831.11(a)(1)



The Party System

Flow and Dissemination of Accident or Incident Information

“Release of information during the investigation is made **only** through Board Member present, Office of Public Affairs, or the Investigator-in-Charge (IIC).”

- 49 Code Federal Regulations 831.13(a)



The Party System

Flow and Dissemination of Accident or Incident Information

“All information concerning the accident goes to IIC before any individual outside the investigation. Parties to the investigation may relay to their organizations information necessary for prevention or remedial action, but no info may be released to any person not a party representative **(including non-party rep employees of party organization) before initial release by the Board without prior approval of IIC**”

- 49 Code Federal Regulations 831.13(b)



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On-Scene Expectations

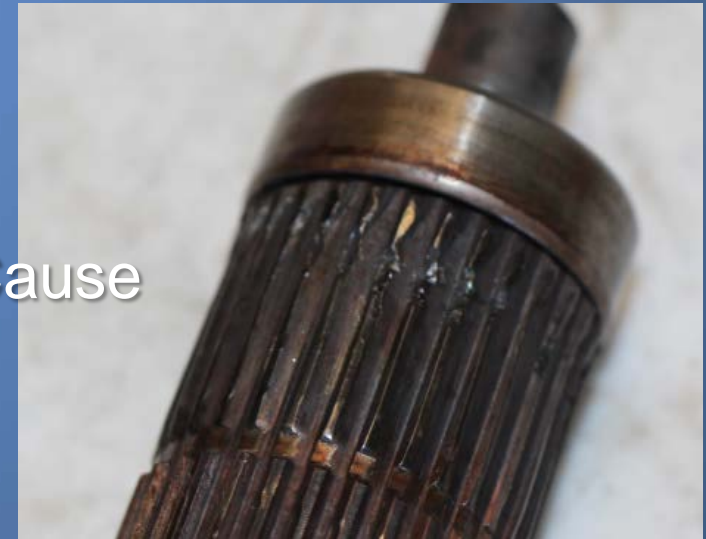
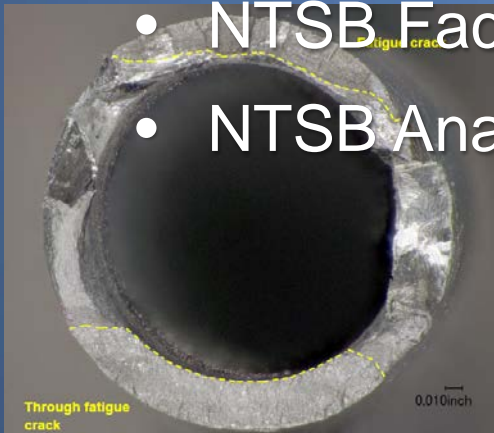
What you can expect from us...

- Coordinate duties of investigative team
- Document accident site
- Discuss findings and develop field notes/group notes
- Morning/Nightly meetings
- Outbrief
- Press briefing to manage flow and dissemination of information



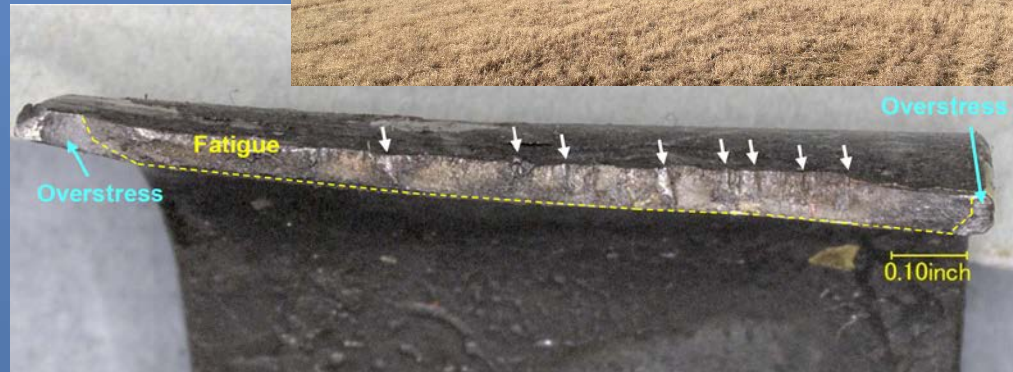
Follow-up Activities

- NTSB Preliminary Report
 - Typically released 5 – 10 days after accident
 - Available at www.nts.gov
- Tests and Examinations
- NTSB Factual Report
- NTSB Analysis and Probable Cause





Read Our Reports!



Where can I find these reports?

Reports

NATIONAL TRANSPORTATION SAFETY BOARD

HOME NEWS & EVENTS TRANSPORTATION SAFETY INVESTIGATIONS DISASTER ASSISTANCE LEGAL ABOUT

NTSB News

NTSB launches team to aviation accident in Thomson Georgia

Read More

Accident Dockets Safety Recommendations Aviation Accident Database Data & Stats Training Center

NTSB
An Independent United States Federal Government Agency

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the U.S. and significant accidents in other modes of transportation—railroad, highway, marine and pipeline. [more »](#)

- Contact NTSB
- Report an Aviation Accident
- Submit a TCAS Notification
- Eyewitness Report
- FOIA Request

NTSB Report

NTSB releases the Preliminary

Photo of the Week

Member Rosekind

Member Rosekind talks to St. Joseph's University students today about the NTSB and its activities with a focus on fatigue, distraction, and alcohol-impaired driving.

News @ NTSB

Video of today's media briefing on the Beech 390 crash in Thomson, GA is now available at youtu.be/az5VUq3r4dU.
14 hours ago · reply · retweet · favorite

NTSB to hold media briefing on yesterday's business jet accident at 1:30 pm ET today at Highway 17 near accident site in Thomson, GA.
19 hours ago · reply · retweet · favorite

NTSB commends the @AmericanBusAssn for its efforts to improve bus operational safety. [#NTSBMVL](https://ou.ly/n/eel)
20 hours ago · reply · retweet · favorite

@ashelzbridges The team is leaving for GA now. Media contact info is in our press release at [1.usa.gov/1XK9d6](https://www.1.usa.gov/1XK9d6)
23 hours ago · reply · retweet · favorite

NTSB investigating yesterday's crash of a Maule MXT-7-180 that crashed in a wooded area north of Easton, Georgia. [1/11](#)

Public Dockets

Release of Reports

49 CFR 831...

- Party members are entitled to review the draft factual report and provide written comments
- 49 CFR 831.14(a) permits party members to submit their own proposed findings based on facts uncovered during investigation

What to do if my company aircraft has a mishap?



NTSB

Accident/Incident Checklist

- ✓ Check NTSB immediate notification criteria (§830.5)
- ✓ Notify NTSB
- ✓ Preserve wreckage
- ✓ Assess cargo for hazardous material
- ✓ Take photos
- ✓ Limit statements to media
- ✓ Make crew available for interview
- ✓ Drug/alcohol test of flight crew
- ✓ Retain records (flight and a/c logbooks)
- ✓ Complete NTSB Form 6120



How do you prepare

- Risk management plan
- Understand the mission risk/severity
- Know what your EMS response time is
- Get to know your local NTSB investigators
- Identify employees who can serve as party representatives



Follow-Up Questions

- Grand Canyon
 - Updates
 - Drones and 3D Modeling
- NTSB Position on Lap Children
 - See NTSB Safety Alert (SA 015) on our website
- Position of Door Off Flights



Your Closest Regional Office

Western Pacific Region

505 S. 336th St., Suite 540

Federal Way, WA 98003

Phone: 253-874-2880

NTSB HQ Communications: 202-314-6290

Chief: Debra Eckrote (253-874-0621)

Deputy Chief: Dennis Hogenson (253-874-0622)



NTSB

All Regional Offices & HQ

Alaska Regional Office

222 West 7th Ave

Anchorage, Alaska 99513

Phone: 907-782-4848

Eastern Region

45065 Riverside Pkwy

Ashburn, Virginia 20147

Phone: 571-223-3930

Central Region

4760 Oakland St.

Denver, Colorado 80239

Phone: 303-373-3500

NTSB Headquarters

490 L'Enfant Plaza SW

Washington, D.C. 20594

Phone: 202-314-6000



NTSB

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