

# US Forest Service Aviation

R9 Mishap Response  
Initial Contact Brief



# Aircraft Accident on Your Forest



**NOW WHAT?**



**RISK AWARENESS**  
**Daily Operational Aviation**  
**Information Flow for Aviation Mishap**



**HOW WELL ARE WE AS AVIATION  
PROFESSIONALS COMMUNICATING Connecting  
the Dots Initial Contact Mishap Response?**



**All aviation mishap  
investigations  
are the responsibility of the  
NTSB**

**This may be delegated**



# WHO IS THE COMMUNICATION CONDUIT ?



## Major Topics

- Site Manager/On-Scene Commander
  - Who is in charge?
- Securing the Site
  - How do we secure the site?
- Safety/Risk Management
  - What precautions need to be taken?
- Documentation
  - What level is required?
- Wreckage Recovery
  - How do we lessen damage?
- Further Examination
  - What do we need to look at?



# Aircraft Accident



## *On Your Forest*

- Fatalities
- FS investigation team
- Role of the line officer
- Role in the Learning Review Board (Chief's level)
- Post accident stress debriefing for survivors and/or affected employees



# Aircraft Accident

*In your jurisdiction*

- Rescue Operations
- Notifications
- Site Safety Precautions
- Wreckage Security



# Potential Aviation Accident Entities on Forest



- ✓ DOD Military Aircraft
- ✓ Forest Service Aircraft
- ✓ Contracted Aircraft
- ✓ General Aviation (AKA THE PUBLIC)

Fatality, Non Fatality  
Accident or Incident

**WHO DECIDES?**

- ✓ Drives Level Investigating that is enacted
- ✓ Drives Level Investigating Authorities  
Examples DOD, NTSB, FS etc





# Desires vs Outcomes



- Enhance Aviation Readiness
- Viable SMS Program
- **Training and Education**
- Accountability
- Leverage New Technologies
- **Proactive vs Reactive**
- Develop And Mature Our Future Aviation Leaders To Carry On The Mission





# Challenges!!!! It's a big outfit



- **WE HAVE A LOT OF USFS AVIATION ASSETS – Internal and Contracted Entities**
- **WE HAVE A LOT OF PEOPLE – Staff, Maintainers, Pilots, Aircrew, Helitac-managers, Air Tanker Base Managers, FAO's, Etc.**
- **WE HAVE A BROAD SPAN- Of Operations**
- **AT THE END OF THE DAY - “How To Make The Right Decisions Daily At All Levels, & Operate The Airline Safely” ...**



# Risk Management

**Purpose: Reduce Risk & Prevent Accidents**



**RESPONSIBILITY: Everyone**

**ACCOUNTIBILITY: Management**



# R9 Aviation Mishap Initial Contact Brief



## PROMOTION POLICY RISK MANAGEMENT ASSURANCE

### EDUCATION TRAINING

IAT / Initial Training  
Annual Training  
SMS Training  
Work Shops Attendance  
IAT / Instructor Qualifications

### POLICY

DUTCH CREEK PROTOCOLS  
Forest Aviation Safety Management Plans  
Base Operation Plans  
**Forest Aviation Mishap Plans**  
Base Security Plans  
SAR Plans  
End Product vs. Flight Service Contract

### FIRE / SEASON

PASP Development  
DORA / ORM  
Daily WT / Balance  
R/W & FW Contracts  
SAFECOM  
Daily Safety / Operations Briefs

### INSPECTIONS / AUDITS

SMS / (Insp/Audit)  
Heli-Base Reviews  
Air Tanker Base Reviews  
Maintenance Facilities Inspections  
Forest Aviation Reviews

### EDUCATION TRAINING

### FIRE / SEASON

### EDUCATION TRAINING

### POLICY REVIEWS

### INSPECTIONS / AUDITS

### POLICY REVIEWS

JAN FEB MAR APR MAY JUN JULY AUG SEP OCT NOV DEC

## ANNUAL CALENDAR



# INITIAL CONTACT INFORMATION FOR AVIATION MISHAPS



- **Information Flow**
- **Information is Coordinated at all Levels**
- **Is the Process of the Information Flow Trained To**
- **Information Provided is relevant at all levels**
- **Simple to Understand**



# AVIATION MISHAP INVESTIGATIONS



## Three Phases

- Phase I Initial Contact
- Phase II Mishap Response Plan
- Phase III Aviation Coordinated Response Protocol

### Phase I

Eastern Area - Aviation Incident/Accident Checklist | 2015

POINT OF CONTACT INFORMATION / WHO CALLED YOU		TIME:
a. Name		c. Duty Position
b. Phone Number		d. Address
Work	Cell	
Fax	Home	e. E-mail
<b>2. ACCIDENT INFORMATION</b>		
a. Aircraft Registration Tail Number	Type of Aircraft	Colors
b. Date & Time of Accident		
c. Location of Aircraft (lat/long, distance from known point)		
d. Hazardous Materials on Board? Y/N What Type?		
e. Weather at Site		
f. Number of Fatalities		Number of Injuries / Hospital Info/Patient Released (Time)
<b>3. ACCIDENT DESCRIPTION</b>		
NTSB Notified (Y/N) Who Notified / Time		FAA Notified (Y/N) Who Notified / Time
NTSB 24Hr. # 202 314 6390		FAA Hot Line: 202 314 6390
<b>ACCORDING TO DESCRIPTION:</b>		
Mission Type:		
Brief Narrative: (What happened)		
Initial Damage:		
<b>4. AIRCRAFT INFORMATION</b>		
a. Aircraft Owner		
b. Pilot in Command & Telephone #		
c. Departure Location	Destination	
d. Flight Route		
e. Fuel on Board (time of departure)		
f. Nearest Commercial Airport/Closest City		
g. Suitable Helicopter Landing Site		
h. Accident Site Secured: Telephone #		

### Phase II

A Publication of the National Wildlife Coordination Group

## Interagency Aviation Mishap Response Guide and Checklist

PMS 503 January 2015  
NFES 2659

*Do not waste time trying to figure out if an event is an accident, that's not your job. If you have an event with an aircraft that results in damage or injury no matter how slight, REPORT IT to DOI or USFS by calling 1-888-464-7427 (888-4MISHAP).*

Has 911 Search and Rescue (SAR) been notified?  
Notify your Bureau / Agency and follow their procedures  
Bureau / Agency Point of Contact and phone number \_\_\_\_\_

### Phase III

USFS Forest Service XXXX, Inc. Aircraft Type, Safety Investigation Report

**PHASE 2-4 OF COORDINATED RESPONSE PLAN FOR AVIATION**  
THIS DOCUMENT CONTAINS MATERIALS INTENDED FOR INTERNAL AGENCY USE ONLY. OFFICE OF GENERAL COUNSEL (OGC) REVIEW IS REQUIRED PRIOR TO RELEASE UNDER THE FREEDOM OF INFORMATION ACT (FOIA).

Place "Type" of report here i.e. Accident, IWP

A/C Type (Helicopter, F/W, Etc...), NR, & Phase of flight (i.e. Emergency Landing)  
Company/Year  
Aircraft Model here i.e. Bell 206B-3

XXX FOREST  
XYZ FIRE  
CITY, STATE  
DATE

PICTURE OF A/C HERE

FOR OFFICIAL USE ONLY Page 3 of 38



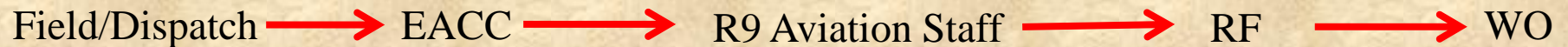
# SITUATIONAL AWARENESS FROM THE FIELD TO RF

## CONNECTING THE DOTS



### Step 1 Initial Contact Mishap Response

**Initial Aviation Mishap Information is consistent, viable, and in a time critical element of 60 minutes.**



# FIRST RESPONDERS LEI OTHER AVIATION SUPPORT PERSONNEL

## Responding to a Transportation Accident

### A GUIDE FOR POLICE AND PUBLIC SAFETY PERSONNEL

NTSB investigators employ procedures similar to those utilized by law enforcement. NTSB safety investigations, while concurrent, are also independent of police investigations. The NTSB will attempt to not interfere with any concurrent criminal investigation or preparation for prosecution.

For aviation accidents, 49 CFR 830.5 requires air carrier operators to notify the NTSB. The carrier will coordinate directly with NTSB investigators.

**To report an incident/accident, please call 844-373-9922 to speak to a Watch Officer at the NTSB Response Operations Center (ROC) in Washington, DC.**



### UPON COMPLETION OF FIRST RESPONDER AND LIFE SAFETY ACTIVITIES

1. Secure scene and preserve evidence
2. Contact the NTSB at 844-373-9922

### PROTECT LIFE, PROPERTY AND EVIDENCE

- Establish a security perimeter around the accident scene.
- Allow Public Safety Personnel access to preserve life, recover the fatally injured and stabilize hazardous materials.
- Prevent disturbance of the accident scene and the wreckage.
- Protect and preserve ground scars and marks made by the aircraft, vehicle, train, vessel, pipeline, and other physical evidence related to the accident.
- Document and photograph pavement evidence prior to re-opening of roadway. Mark possible evidence for analysis by the NTSB investigators upon arrival.
- Remove highway vehicles to a secure location and ensure that recovery operations do not alter critical pre-crash adjustments such as airbrake settings.
- Maintain a record of personnel who enter the accident scene.

## How to Support the NTSB

### PRIOR TO NTSB ARRIVAL, RESTRICT SCENE ACCESS TO AUTHORIZED PERSONNEL

- Police/Fire/EMS
- Medical Examiner/Coroner
- State and Federal OSHA
- Other Emergency Services Agencies

#### Aviation Accidents

- Federal Aviation Administration (FAA)
- Air Carrier/Operators investigative teams must call the NTSB at 844-373-9922 prior to scene entry

#### Rail/Transit Accidents

- Federal Railroad Administration (FRA)
- Federal Transit Administration (FTA)

#### Marine Accidents

- United States Coast Guard
- State or local waterway or harbor police

#### Pipeline and Hazardous Materials Accidents

- Pipeline and Hazards Materials Safety Agency (PHMSA)
- State pipeline regulator

Upon arrival of the NTSB, scene access should be coordinated with the NTSB and local law enforcement.

### POTENTIAL HAZARDS AT AN ACCIDENT SCENE

Potentially dangerous materials that may be present include but are not limited to: toxic chemicals, pressurized objects (oxygen systems, hydraulic systems, accumulators, tires, airbag systems, evacuation chutes), chemical / fluids (fuel, oil, hydraulic fluids, battery acid and other oxidizers), fire bottles / extinguishers, flares, ballistic recovery systems (i.e. airframe parachutes), radioactive materials, explosives, railroad high voltage 3rd rails, railroad overhead wires.





# FIRST RESPONDERS LEI

## OTHER AVIATION SUPPORT PERSONNEL

### WRECKAGE DOCUMENTATION

- Obtain the aircraft registration number (N number), name of marine vessel, truck, or bus operator; pipeline operator; railroad company, and any other unique identifying information.
- Photograph or video overall accident scene starting at the initial point of impact (if possible). Include equipment such as locomotives, cockpit or operators controls.
- Photograph or video ground scars or marks made by the aircraft, vehicle, train, pipeline or vessel.
- Secure any unsecured electronic data or video recorders that may have been dislodged in the accident.

### INJURED/FATALITIES

- Gather patient transport information from EMS to account for all injured victims.
- Coordinate with the NTSB prior to documenting and recovering fatally injured victims. If the NTSB is not available, document the following prior to recovery of victims: original position of the remains, use/condition of restraint systems, use/condition of lifesaving equipment, and intentional or accidental manipulation of the wreckage, vessel control panels, machinery during the recovery process.
- Collect names and contact information for all persons injured and uninjured in the accident.

### WITNESS DOCUMENTATION

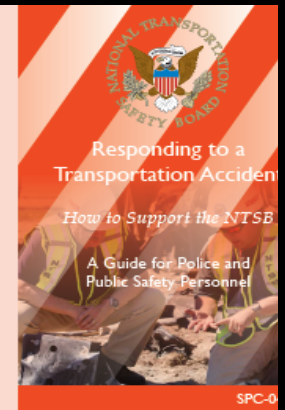
- Obtain name, address, email address and phone numbers.
- Determine location of witness relative to the accident site.
- Capture description of what they observed or heard.
- Identify the name of the person reporting accident (from 911 recordings).
- Obtain video or still photo images witness has of the accident scene.
- Identify and secure any video from security cameras.
- Secure cell phones, or other recording devices in the accident scene.

### MEDIA RELATIONS

- Only the NTSB may release factual information on the investigation; do not speculate on the cause of the accident.
- Coordinate media releases and press conferences with the NTSB public affairs officer.
- The NTSB will not release names of crew members, passengers, or other victims associated with the accident.

### CONTACT US

To report an incident/accident or if you are a public safety agency, please call 1-844-373-9922 to speak to a Watch Officer at the NTSB Response Operations Center (ROC) in Washington, DC.





# OH! %^&\*

## R9 Has An Aviation Accident



### It's A Team Effort

Practice & Train the Way You Expect to Execute



- Usually Going to start with a Phone Call
- Take A Deep Breath
- Duty Officers Have the Initial Contact Sheet Accessible
- Take Down The Contact Information
  - Try and Follow the Format
  - Get as Much Information in the first Phone Call
  - Make Sure You Give Your Contact Information
- Assemble All Trained Personnel To Split Up Initial Aviation Mishap Response List
  1. EACC Lead With Notes Page
  2. Page 1
  3. Page 2

POINT OF CONTACT INFORMATION / WHO CALLED YOU		TIME:
a. Name		c. Duty Position
b. Phone Number		d. Address
Work	Cell	
Fax	Home	e. E-mail
2. ACCIDENT INFORMATION		
a. Aircraft Registration Tail Number	Type of Aircraft	Colors
b. Date & Time of Accident		
c. Location of Aircraft (lat/long, distance from known point)		
d. Hazardous Materials on Board? Y N What Type?		
e. Weather at Site		
f. Number of Fatalities	Number of Injuries / Hospital Info/Patient Released (Time)	
3. ACCIDENT DESCRIPTION		
NTSB Notified (Y/N) Who Notified / Time		FAA Notified (Y/N) Who Notified / Time
NTSB 24Hr. # 202 314 6290		FAA Hot Line: 202 314 6290
<b>ACCIDENT/INCIDENT DESCRIPTION:</b>		
<u>Mission Type:</u>		
<u>Brief Narrative: (What happened)</u>		
<b>Initial Damage:</b>		
4. AIRCRAFT INFORMATION		
a. Aircraft Owner		
b. Pilot in Command & Telephone #		
c. Departure Location	Destination	
d. Flight Route		
e. Fuel on Board (time of departure)		
f. Nearest Commercial Airport/Closest City		
g. Suitable Helicopter Landing Site		
h. Accident Site Secured: Telephone #		

4 PARTS

1. POC Information
  - Remember to Exchange Your Info
2. Accident Information
  - Do not Release Names or Information to Folks Outside of Page 2.
3. Accident Description
  - Ask if NTSB or FAA has been notified
4. Aircraft Information
  - Pay Attention to Accident Site Secured

The R9 EACC Center Manager or Aviation Manager / Coordinator will notify the following FS Regional Office or DOI Aviation individuals or their acting of an **AVIATION** related incident/accident. If unable to get in contact with EACC proceed to the next Forest Service individual. The objective is to forward the information contained on page one in the first 30 to 60 minutes of the aviation mishap/incident.

**Forest Service Aviation**

Individual	Contacted By	Date/Time
1. Nick Hough (R9 RASM) Work: 414-297-3165	_____	_____
	Home: 910-554-4592	Cell: 414-208-7570
2. Bob Madill (R9 RAO) Work: 414-297-3744	_____	_____
		Cell: 414-207-2224
3. Doug Ottosen (Fire/Emergency Ops) Work 414-297-3345	_____	_____
		Cell: 414-389-7434
4. Clay Templin (Acting, R9 Director FAM) Work 414-297-1280	_____	_____
		Cell: 602-525-1792
5. Dan Zimmerman (NA S&PF RAO) Work: 610-557-4147	_____	_____
	Home: 610-608-3907	Cell: 610-742-7860

**Forest Service Aviation will notify the following individuals and offices of the incident/accident:**

Gary Sterling (Branch Chief, Aviation Safety) \_\_\_\_\_  
Work: 208-387-5614 Cell: 208-866-6513

**Department of Interior Fire Management Officers**

Jim McMahon (Midwest NPS) \_\_\_\_\_  
Work: 402-661-1754 Home: 712-847-0058 Cell: 402-630-0685

Mark Musitano (Northeast NPS) \_\_\_\_\_  
Work: 215-597-4865 Home: \_\_\_\_\_ Cell: 215-900-6050

Glen Stratton (FWS R3 & 5) \_\_\_\_\_  
Work: 413-253-8589 Home: \_\_\_\_\_ Cell: 413-362-9119

Tom Remus (Midwest BIA) \_\_\_\_\_  
Work: 218-322-4793 Home: 218-752-1008 Cell: 218-259-8658

**DOI Aviation will notify the following individuals and Offices of the incident/accident:**

Keith Raley (NBC Aviation Safety Manager) \_\_\_\_\_  
Work: 888-464-7427 Cell: 208-867-7875

- Have An Initial Copy of Page 1 for the Phone Calls
- Continue Down the List if 1<sup>st</sup> person isn't contacted
- Relay Page 1 will be Forwarded to RASM ASAP
- Make Sure You Document Time of Contact and Time of Returned Calls to Note Taker



# If a General Aviation aircraft crashes?

- Document any resource damage
- Removal of the wreckage



# Supervise and Evaluate

Risk management is a **continual process** throughout the life cycle of the system, mission, or activity.

Leaders at every level must ensure **controls are sustained** over time.

Once controls are in place, the process must be periodically **re-evaluated to ensure their effectiveness.**



## TWO QUESTIONS FOR 2020



1. Where or what type of evolution is possibly our next aviation accident going to happen?



2. What are we going to do proactively to prevent it from happening?

Airspace Intrusion

Low Altitude Environment

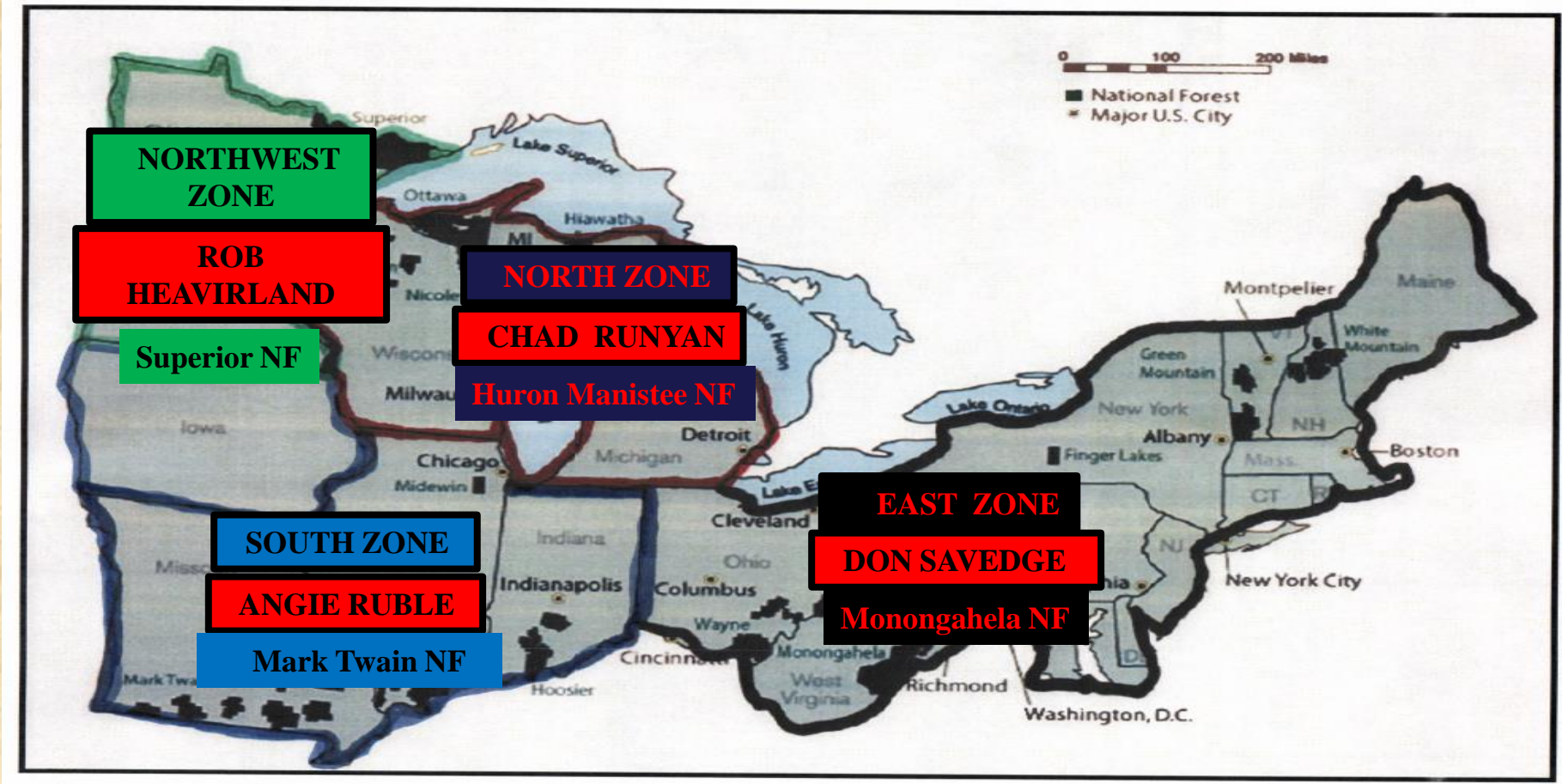
Class D Airspace due to overloading flight pattern

Low Visibility in FTA and De-confliction





# 2018 Zone Forest Aviation Officers Locations Region 9 / Eastern Region





**2018 ZONE FOREST AVIATION OFFICERS  
REGION 9 / EASTERN REGION  
CONTACT INFORMATION**

**Northwest  
Zone / FAO**

**Rob Heavirland**  
Forest Aviation Officer

Forest Service  
Chippewa and Superior National Forests

p: 218-322-2715  
c: 218-343-7995  
[rheavirland@fs.fed.us](mailto:rheavirland@fs.fed.us)

402 11th Street SE  
Grand Rapids, MN 55744  
[www.fs.fed.us](http://www.fs.fed.us)

**North  
Zone / FAO**

**Chad Runyan**  
North Zone Aviation Officer

Forest Service  
Eastern Regional Office

p: 231-775-5023 ext 8702  
c: 218-343-9317  
f: 231-775-8742  
[carunyan@fs.fed.us](mailto:carunyan@fs.fed.us)

1755 S. Mitchell Street  
Cadillac, MI 49601  
[www.fs.fed.us](http://www.fs.fed.us)

**South  
Zone / FAO**

**Angie Ruble**  
Southern Zone Forest Aviation Officer

Forest Service  
Mark Twain National Forest  
Supervisors Office

p: 573-341-7424  
c: 573-241-0604  
f: 573-426-6800  
[aruble@fs.fed.us](mailto:aruble@fs.fed.us)

401 Fairgrounds Rd.  
Rolla, MO 65401  
[www.fs.fed.us](http://www.fs.fed.us)

**East  
Zone / FAO**

**Don Savedge**  
East Zone Forest Aviation Officer

Forest Service  
Eastern Regional Office

p: 814-728-6168  
c: 540-742-2619  
f: 814-726-1465  
[donaldsavedge@fs.fed.us](mailto:donaldsavedge@fs.fed.us)

4 Farm Colony Drive  
Warren, PA 16365-1465  
[www.fs.fed.us](http://www.fs.fed.us)

# Questions ?





# EASTERN REGION UAS STRATEGIC PLAN



**THIS AIN'T NO DISCO**



# UAS Programmatic Risk Assessment



END STATE FOR MANAGEMENT OF UAS AVIATION PROGRAM IS UNTENABLE WITHOUT THE PROPER STAFFING / MANAGERIAL STRUCTURE.



## END STATE

The agency is moving forward with a UAS program and this programmatic risk assessment will be essential to provide the best training, product development and utilization. After conducting the site visits, the vendor will facilitate a group of Agency Subject Matter Experts in developing a risk matrix and mitigation measures. The vendor will then produce a final Programmatic Risk Assessment similar to

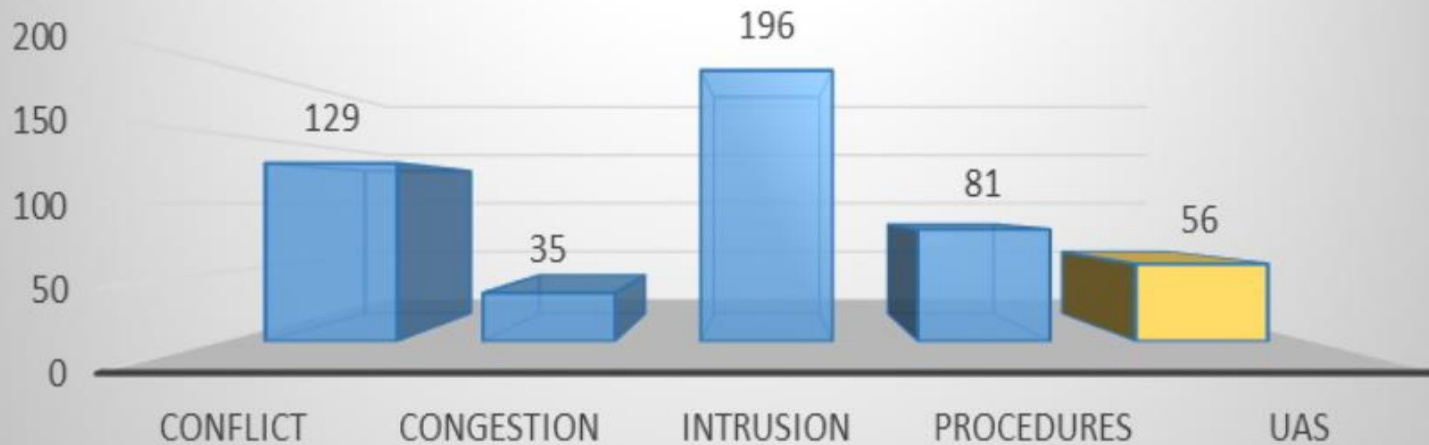
[https://www.fs.fed.us/fire/av\\_safety/risk\\_management/Rappel\\_Final\\_Report\\_3-2-2010.pdf](https://www.fs.fed.us/fire/av_safety/risk_management/Rappel_Final_Report_3-2-2010.pdf), which will help guide strategic rollout of the operational UAS program.



# UAS & Airspace



## TOP 5 Airspace Reports (10-Year Totals)



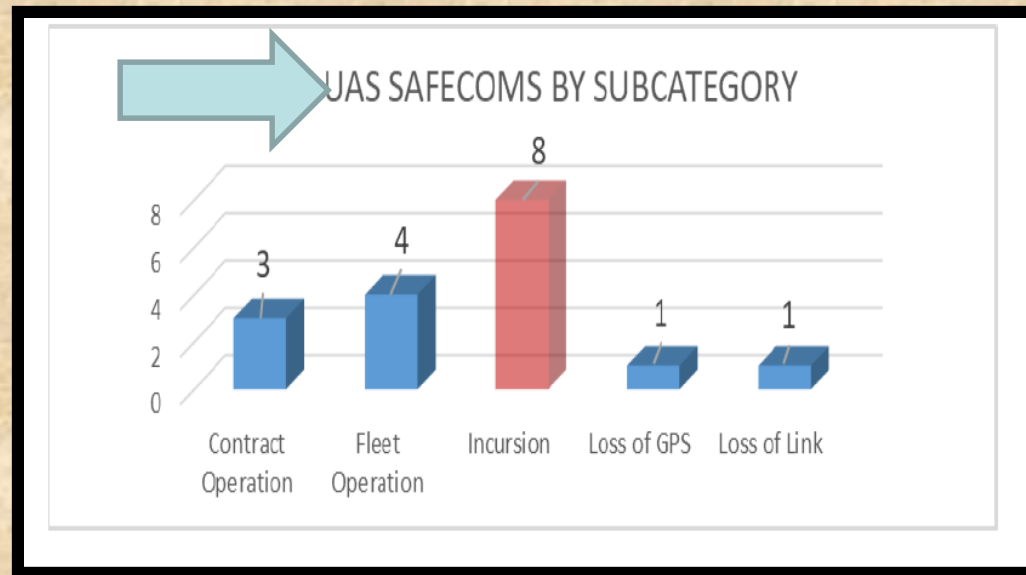
*Note: UAS has reached the Top 5 in the 10 year totals with only 3 years' worth of recorded data.*

### EASTERN REGION FACTORS TO CONSIDER

- ✓ Trending Issue for Eastern Region due to a more complex Air Space geographical area.
- ✓ Far less Class G airspace than West of the Mississippi.
- ✓ Urban interface with Forests
- ✓ Population Density



# UAS & SAFECOMS



SAEFCOMS Generated have driven the reportable criteria for the SAFECOM System.

- ✓ Assists in trending data to help with finding and addressing facts
- ✓ Define Areas for Improvement
- ✓ Aides in redefining Quality Assurance Program and Audits
- ✓ Focuses our training and education to address safety issues



## UAS INCIDENT/ACCIDENT REPORTABLE CRITERIA

**THERE ARE FIVE POINTS TO CONSIDER WHEN YOU GET NOTIFICATION OF A UAS MISHAP AND WHETHER OR NOT TO ELEVATE THE OCCURRENCE:**

1. Did the FS have operational control? If YES, go to 2.
2. If the mishap occurred over people, Immediate notification of the BC-ASMS,
3. Loss of consciousness or death associated with the UAV (BC-ASMS and NTSB Reportable)
4. Greater than \$500.00 damage to property OTHER THEN THE UAV (BC-ASMS and NTSB Reportable)  
or,
5. Mishap involving a UAV greater than 300lbs (BC-ASMS and NTSB reportable).

**\*SAFECOM consideration when noting a return to contract availability (airworthiness)\***

- If the USFS has contracted the UAS for work, any return to contract availability would be coordinated as stipulated in the contract.
- If the USFS is allowing DOI to operate the UAV but retaining operational control then the return to contract availability would default to the DOI process. We accept their processes and simply noting that the coordination took place is appropriate.





# R9 UAS OPERATIONAL / SAFETY PLAN ?



## STAFFING

- 2 x Part 107 Pilots
- # of Pilots ?
- Contracted Pilots
  - Based on Tier / Type
- Other Regional Pilots
- \*\*New\*\*** Regional UAS Program Manager

## FUNDING

- WO / WCF Funding Covers
- Maintenance Services
  - Maintenance Parts
  - Regional Costs

## EQUIPMENT

- WO / WCF Sensors/Vehicle
- Standardized by Mission ?
- Decision on Sensors
- Relegated to Small (Less than 55 Pds)

## EASTERN REGION POTENTIAL MISSION AREAS

- ✓ Engineering
- ✓ Fuels (RX Burning)
- ✓ Forest Health
- ✓ Emergency Management Requests
- ✓ Timber
- ✓ Wildfire
- ✓ Resource
- ✓ Search & Rescue
- ✓ Archeological Research
- ✓ Communications

**WHAT DID I FAIL TO MENTION?**



# Aviation Policy - UAS



- 14 CFR Part 107  
Aug 2016
- FSM 5713.4 (2017)
- USFS Desk Guide  
Nov 2016





# Aviation Policy - UAS



- Operate under Part-107
- Certificate of Authorization (COA)
- Remote Pilot Certificate and Aircraft Registration required





# Aviation Policy - UAS



- 55 lb, 400' AGL, not over people, day light, VLOS with max speed 100 mph / 87knots
- Submit Mission Request Form to RASM and RAO





## 5704.9 Forest Service Employees

Employees have the responsibility to immediately report to the appropriate official any instances of unsafe equipment or aviation operations.



[www.safecom.gov](http://www.safecom.gov)

(FSM 5723.1 and 5720.46)



## **BOTTOMLINE**

**HEALTH & SAFETY OF OUR AVIATION  
OPERATIONS THROUGH CONTINUOUS  
IMPROVEMENT**



**Leadership + Education + Standardization + Training + Mentoring = SAFE Mission Execution**

**QUESTIONS**