NTSB Public Aircraft Operations Safety Forum

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4 Pillars of DOI's Aviation Safety & Accident Prevention Program

U.S. Dept. of the Interior Aviation
History

- **U.S. Department of the Interior aviation program in the 5 years prior to Aviation Management's establishment in 1973:**

  - **148 aircraft accidents.**
  - **29 employees killed.**
  - **48 employees seriously injured.**
  - **$12.1M in damage and claims.**
  - **Poor utilization of Department aircraft.**
  - **Varying maintenance standards & quality control.**
  - **Pilot qualification & standardization issues.**
  - **Fragmented & costly management control.**

- **1972 DOI Aircraft Study recommendation.**

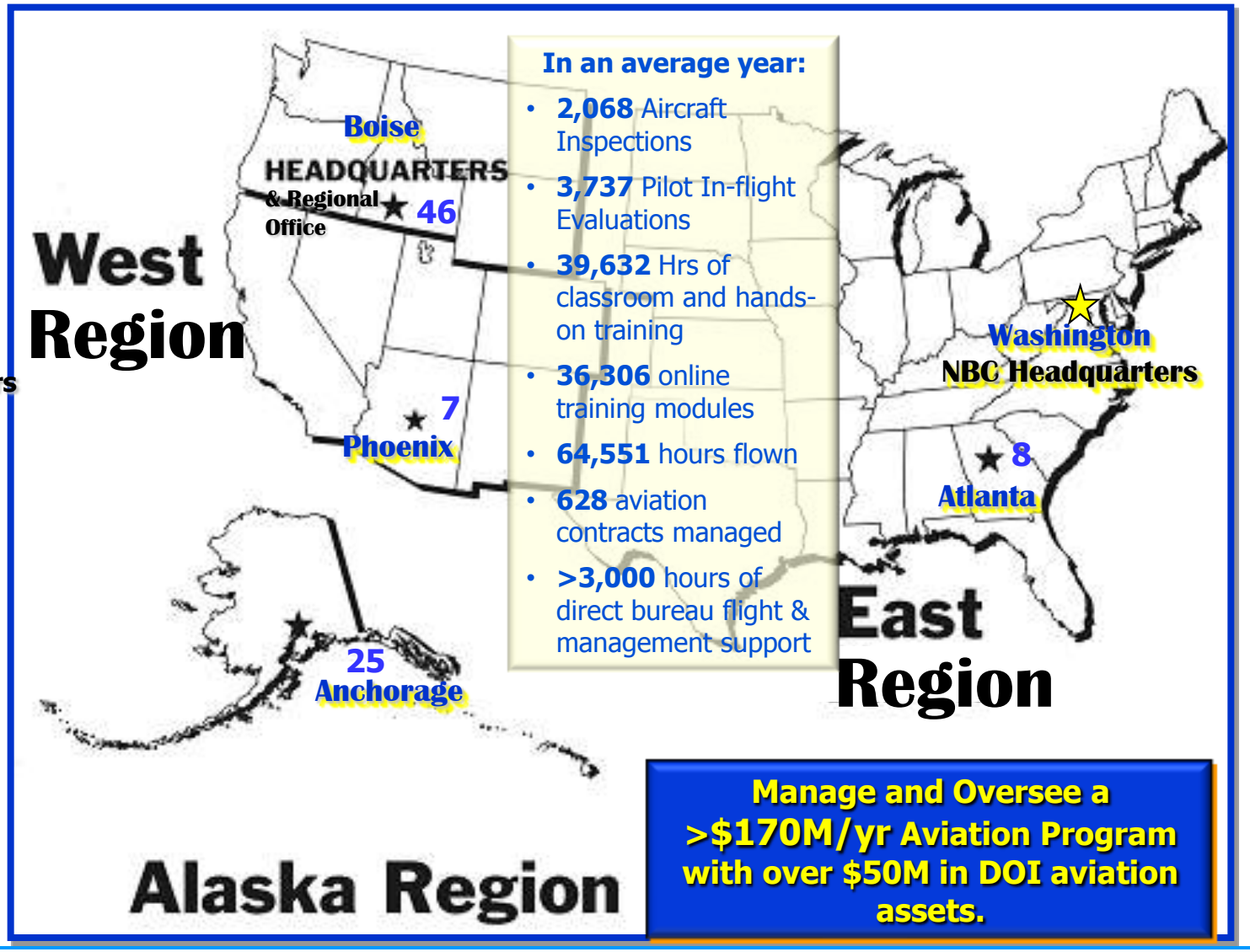
DOI Aviation Management Mission

Secretary of the Interior on July 1, 1973 to "Raise the Safety standards, increase the efficiency, and promote the economical operation of aircraft activities in the Department of the Interior"

1. Policy
2. Aviation safety and aircraft accident prevention programs
3. Procuring DOI-owned aircraft, commercial aviation services
4. Develop aviation user training programs
5. Inspecting and monitoring aircraft operations to assure those standards are being met

DOI Aviation Management

- 86 Fed.
- 12 Contractors



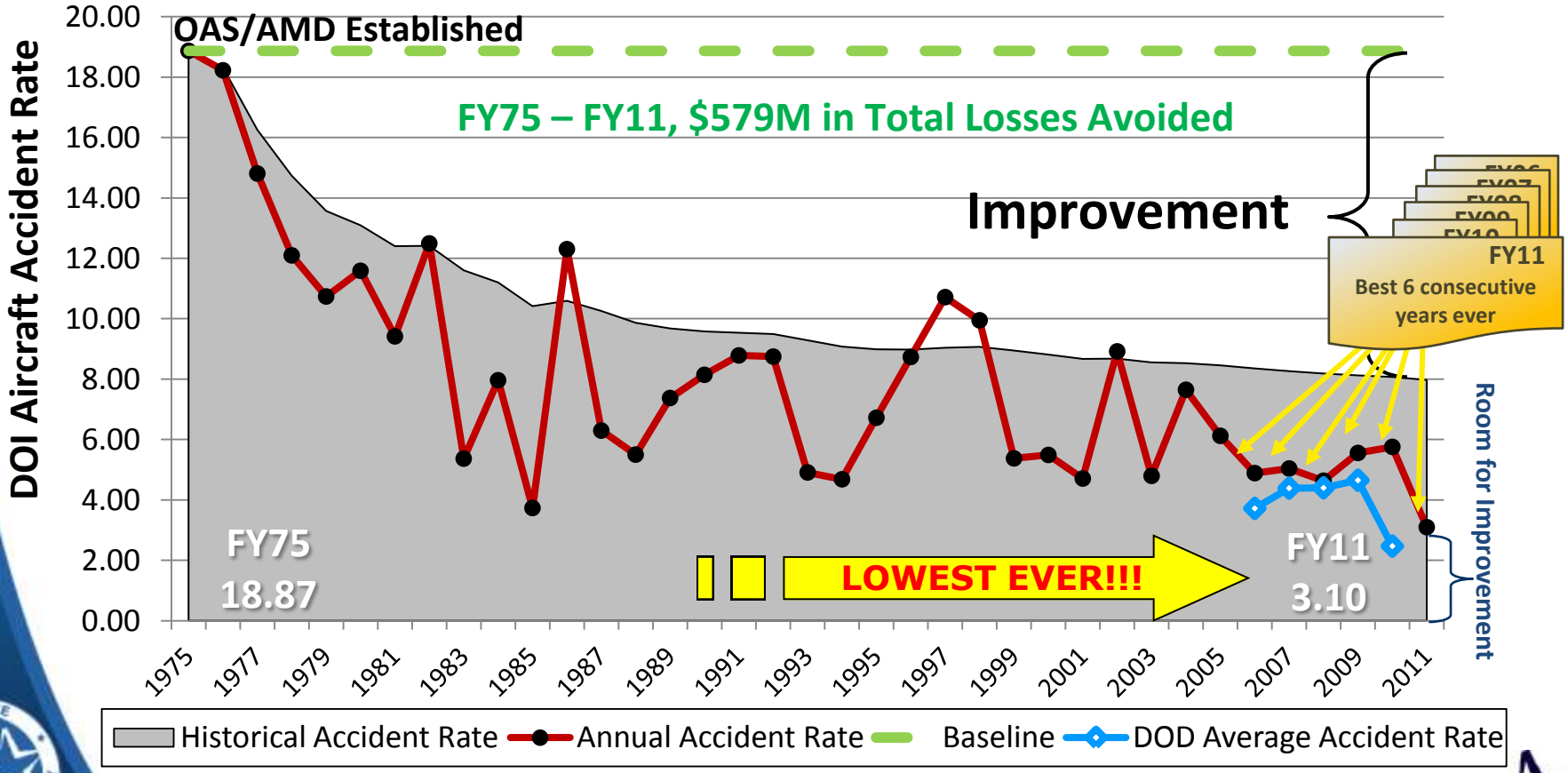
In an average year:

- **2,068** Aircraft Inspections
- **3,737** Pilot In-flight Evaluations
- **39,632** Hrs of classroom and hands-on training
- **36,306** online training modules
- **64,551** hours flown
- **628** aviation contracts managed
- **>3,000** hours of direct bureau flight & management support

Manage and Oversee a >$170M/yr Aviation Program with over $50M in DOI aviation assets.

Aviation Safety – A Core Metric

- *Aviation accident rate continues to decline.*
- *Total estimated **$579 million** in accident costs avoided.*
- *Most important benefit is not measurable – reduction in fatalities.*



Aviation Flight Hours & Costs

Type	Airplane	Helicopter	Total Hours	Cost
Contract	11,675.1	20,874.6	32,549.7	$ 89,599,765.02
Fleet	19,691.5	1,714.3	21,405.8	$ 8,593,438.40
ARA	9,588.7	1,007.3	10,596 .0	$ 5,785,117.56
Total	40,955.3	23,596.2	64,551.5	$103,978,320.98

- **Services provided to 26 federal and state government agencies**
- **105 Fleet aircraft**
- **Manage 628 DOI Flight Service Contracts**
- **Over 43,000 contracted flight hours in support of DOI missions.**

An ISO 9001:2000 CERTIFIED Shared Services Provider
BSI FS 537331

NBC-Aviation Management Oversight

"Filling the Holes in the Cheese"

- Firefighting.
- Low level surveys.
- Off-airport operations.
- ACETA.
- Search and rescue.
- Law enforcement.
- External loads.
- Short haul.

14 CFR
91

FAA

Part
135
FAA

FAA

Public / Special Use Missions & Aircraft

AMD

(higher risk)

Part 121 FAA

DOI Aviation Resource Management

Fleet and vendor aircraft are utilized to perform/support DOI missions

How do we regulate both?

- **Fleet: Department Manuals (DMs)**
- **Vendor: Contractual agreements - basic criteria required by the DMs. Contract language adjusted for unique mission/bureau requirements.**

Both leverage FARs (14 CFR) by incorporating regulations by reference.

Department of the Interior
Departmental Manual

Effective Date: 07/27/11
Series: Aviation Management
Part 351: Aviation Operations
Chapter 1: Flight Operations Standards and Procedures

Originating Office: National Business Center

351 DM 1

1.1 **General**. This chapter prescribes flight oper[illegible]tandards and proce[illegible] activities within the Department of the Interio[illegible]. The standards and pro[illegible] fleet aircraft, commercial aviation operati[illegible]d privately owned aircraft on[illegible]

A. Applicability of P[illegible]perating Handbook and FAA-Approved [illegible] Information, procedures [illegible]itations contained in pilots' operating handb[illegible] Aviation Administ[illegible]AA)-approved flight manuals (and supplements) a[illegible] operations; e[illegible]r's manual, aircraft flight manual, owner's handbook, a[illegible] informati[illegible]nual.

B. Applicability of Federal Aviation Regulations (FAR) to DOI Operations Involving Owned or Operated Aircraft. Title 14 of the Code of Federal Regulations (CFR), Part 91, including those portions that apply to civil aircraft, applies to DOI owned or operated aircraft operations except as noted in the Departmental Manual (DMs) and/or Operational Procedures Memoranda (OPMs). All other FARs are applicable as directed by Parts 350-354 of the Departmental Manual.

C. Vendor Operations Specifications. Aircraft will be operated and maintained under provisions of 14 CFR 91, 121, 125, 127, 133, 135, or 137, as appropriate, including those portions applicable to civil aircraft, unless otherwise authorized by the Associate Director, Aviation Management Directorate (AMD), National Business Center (NBC).

D. Vendor Certification. Vendors providing commercial services with pilot(s) shall be certificated under 14 CFR 121, 125, 127, 133, 135, or 137, as appropriate.

E. Pre-flight/Post-flight Inspections. Each pilot-in-command shall, before beginning a flight, be familiar with all available information concerning that flight in accordance with 14 CFR 91 Subpart B. The pilot-in-command shall conduct a visual, preflight inspection before the first flight of each day. A postflight inspection shall be made after the last flight of the day. Deficiencies, which might affect safety of flight, shall be corrected prior to commencing flight. Pilots shall use applicable cockpit checklists.

Applicability of Federal Aviation Regulations (FAR) to DOI Operations Involving Owned or Operated Aircraft. Title 14 of the Code of Federal Regulations (CFR), Part 91, including those portions that apply to civil aircraft, applies to DOI owned or operated aircraft operations except as noted in the Departmental Manual (DMs) and/or Operational Procedures Memoranda (OPMs). All other FARs are applicable as directed by Parts 350-354 of the Departmental Manual

IMC or night conditions as defined in 14 CFR 1, with DOI personnel on board.

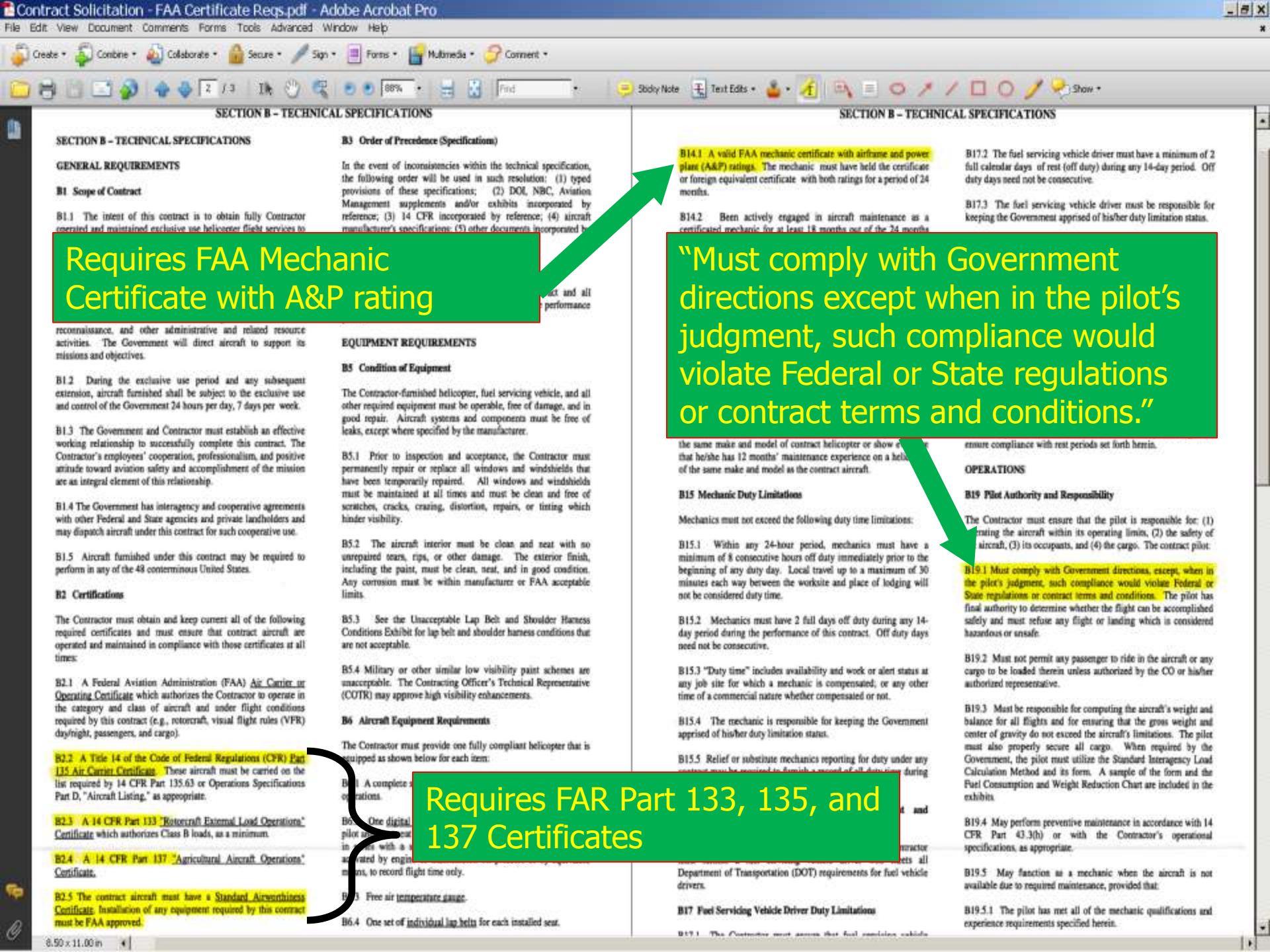
F. Airplane: Single Engine (Turbine-Engine-Powered). DOI Owned and/or Operated, Other Government Agency Owned or Operated. Single engine turbine-powered airplanes used for IFR flight shall meet the equipment requirements of 14 CFR 135, Subpart C, and the additional maintenance requirements of 14 CFR 135 for single engine passenger-carrying operations (substituting bureau or other agency for certificate holder). The pilot shall be instrument rated and current for IFR in accordance with 14 CFR Part 61. The pilot shall have a current IFR flight check as per 351 DM 3.

G. Airplane: Single Engine (Turbine-Engine-Powered) Vendor Operated.

(1) Vendor turbine-engine-powered single engine aircraft operations shall not be conducted into IMC or night conditions as defined in 14 CFR 1 with Government personnel on board, unless the airplane is equipped in accordance with the requirements of 14 CFR 135, Subpart C.

(2) If the aircraft is so equipped, IFR operations shall be conducted in accordance with the vendor's approved operating specifications.

H. Airplane – Multiengine.


Contract Solicitation - FAA Certificate Reqs.pdf - Adobe Acrobat Pro
SECTION B – TECHNICAL SPECIFICATIONS
SECTION B – TECHNICAL SPECIFICATIONS
GENERAL REQUIREMENTS
B1 Scope of Contract
B1.1 The intent of this contract is to obtain fully Contractor
B1.2 During the exclusive use period and any subsequent extension, aircraft furnished shall be subject to the exclusive use and control of the Government 24 hours per day, 7 days per week.
B1.3 The Government and Contractor must establish an effective working relationship to successfully complete this contract. The Contractor's employees' cooperation, professionalism, and positive attitude toward aviation safety and accomplishment of the mission are an integral element of this relationship.
B1.4 The Government has interagency and cooperative agreements with other Federal and State agencies and private landholders and may dispatch aircraft under this contract for such cooperative use.
B1.5 Aircraft furnished under this contract may be required to perform in any of the 48 conterminous United States.
B2 Certifications
The Contractor must obtain and keep current all of the following required certificates and must ensure that contract aircraft are operated and maintained in compliance with those certificates at all times:
B2.1 A Federal Aviation Administration (FAA) Air Carrier or Operating Certificate which authorizes the Contractor to operate in the category and class of aircraft and under flight conditions required by this contract (e.g., rotorcraft, visual flight rules (VFR) day/night, passengers, and cargo).
B2.2 A Title 14 of the Code of Federal Regulations (CFR) Part 135 Air Carrier Certificate. These aircraft must be carried on the list required by 14 CFR Part 135.63 or Operations Specifications Part D, "Aircraft Listing," as appropriate.
B2.3 A 14 CFR Part 133 "Rotorcraft External Load Operations" Certificate which authorizes Class B loads, as a minimum.
B2.4 A 14 CFR Part 137 "Agricultural Aircraft Operations" Certificate.
B2.5 The contract aircraft must have a Standard Airworthiness Certificate. Installation of any equipment required by this contract must be FAA approved.
B3 Order of Precedence (Specifications)
In the event of inconsistencies within the technical specification, the following order will be used in such resolution: (1) typed provisions of these specifications; (2) DOI, NBC, Aviation Management supplements and/or exhibits incorporated by reference; (3) 14 CFR incorporated by reference; (4) aircraft
EQUIPMENT REQUIREMENTS
B5 Condition of Equipment
The Contractor-furnished helicopter, fuel servicing vehicle, and all other required equipment must be operable, free of damage, and in good repair. Aircraft systems and components must be free of leaks, except where specified by the manufacturer.
B5.1 Prior to inspection and acceptance, the Contractor must permanently repair or replace all windows and windshields that have been temporarily repaired. All windows and windshields must be maintained at all times and must be clean and free of scratches, cracks, crazing, distortion, repairs, or tinting which hinder visibility.
B5.2 The aircraft interior must be clean and neat with no unrepaired tears, rips, or other damage. The exterior finish, including the paint, must be clean, neat, and in good condition. Any corrosion must be within manufacturer or FAA acceptable limits.
B5.3 See the Unacceptable Lap Belt and Shoulder Harness Conditions Exhibit for lap belt and shoulder harness conditions that are not acceptable.
B5.4 Military or other similar low visibility paint schemes are unacceptable. The Contracting Officer's Technical Representative (COTR) may approve high visibility enhancements.
B6 Aircraft Equipment Requirements
The Contractor must provide one fully compliant helicopter that is equipped as shown below for each item:
B6.1 A complete
B6.2 One digital
B6.3 Free air temperature gauge.
B6.4 One set of individual lap belts for each installed seat.
Requires FAA Mechanic Certificate with A&P rating
SECTION B – TECHNICAL SPECIFICATIONS
B14.1 A valid FAA mechanic certificate with airframe and power plant (A&P) ratings. The mechanic must have held the certificate or foreign equivalent certificate with both ratings for a period of 24 months.
B14.2 Been actively engaged in aircraft maintenance as a
the same make and model of contract helicopter or show
that he/she has 12 months' maintenance experience on a
of the same make and model as the contract aircraft.
B15 Mechanic Duty Limitations
Mechanics must not exceed the following duty time limitations:
B15.1 Within any 24-hour period, mechanics must have a minimum of 8 consecutive hours off duty immediately prior to the beginning of any duty day. Local travel up to a maximum of 30 minutes each way between the worksite and place of lodging will not be considered duty time.
B15.2 Mechanics must have 2 full days off duty during any 14-day period during the performance of this contract. Off duty days need not be consecutive.
B15.3 "Duty time" includes availability and work or alert status at any job site for which a mechanic is compensated; or any other time of a commercial nature whether compensated or not.
B15.4 The mechanic is responsible for keeping the Government apprised of his/her duty limitation status.
B15.5 Relief or substitute mechanics reporting for duty under any
Department of Transportation (DOT) requirements for fuel vehicle drivers.
B17 Fuel Servicing Vehicle Driver Duty Limitations
B17.2 The fuel servicing vehicle driver must have a minimum of 2 full calendar days of rest (off duty) during any 14-day period. Off duty days need not be consecutive.
B17.3 The fuel servicing vehicle driver must be responsible for keeping the Government apprised of his/her duty limitation status.
"Must comply with Government directions except when in the pilot's judgment, such compliance would violate Federal or State regulations or contract terms and conditions."
ensure compliance with rest periods set forth herein.
OPERATIONS
B19 Pilot Authority and Responsibility
The Contractor must ensure that the pilot is responsible for: (1)
aircraft, (3) its occupants, and (4) the cargo. The contract pilot:
B19.1 Must comply with Government directions, except, when in the pilot's judgment, such compliance would violate Federal or State regulations or contract terms and conditions. The pilot has final authority to determine whether the flight can be accomplished safely and must refuse any flight or landing which is considered hazardous or unsafe.
B19.2 Must not permit any passenger to ride in the aircraft or any cargo to be loaded therein unless authorized by the CO or his/her authorized representative.
B19.3 Must be responsible for computing the aircraft's weight and balance for all flights and for ensuring that the gross weight and center of gravity do not exceed the aircraft's limitations. The pilot must also properly secure all cargo. When required by the Government, the pilot must utilize the Standard Interagency Load Calculation Method and its form. A sample of the form and the Fuel Consumption and Weight Reduction Chart are included in the exhibits.
B19.4 May perform preventive maintenance in accordance with 14 CFR Part 43.3(h) or with the Contractor's operational specifications, as appropriate.
B19.5 May function as a mechanic when the aircraft is not available due to required maintenance, provided that:
B19.5.1 The pilot has met all of the mechanic qualifications and experience requirements specified herein.
Requires FAR Part 133, 135, and 137 Certificates

SECTION B – TECHNICAL SPECIFICATIONS

hours (not necessarily consecutive) will apply against the pilot's flight limitations.

B19.5.3 The pilot does not accomplish scheduled maintenance, such as 50- and 100-hour inspections.

B20 Flight Operations

Regardless of any status as a public aircraft operation, the Contractor must operate in accordance with their approved FAA Operations Specifications and all portions of 14 CFR Part 91 (including those portions applicable to civil aircraft) and each certification required under Section B2 unless otherwise authorized by the CO. The Contractor must ensure that all personnel operate in compliance with the following requirements:

B20.1 Manifesting. The PIC must ensure that a manifest of all crewmembers and passengers on board has been completed and that a copy of this manifest remains at the point of initial departure. Manifest changes must be left at subsequent points of departure when practicable. A single manifest may be left with an appropriate per multiple short flights will be made w area and will involve frequent change

B20.2 Passenger briefings. Before ensure that all passengers have been CFR Part 135. Briefings for short flig unless new passengers come aboard. location/use of the following:

a. Emergency locator transmitter.
b. First aid/survival kits.
c. Personal protective equipment.

B20.3 Dual controls must be removed or deactivated prior to

B20.10 The pilot must remain at the flight controls while rotors are turning with the following exception. For post-flight procedures and/or preventative maintenance purposes only and after engine(s) have been shut down, the pilot may exit the aircraft while the rotor(s) are turning, if the Rotorcraft Flight Manual allows and if the pilot remains within the arc of the rotor(s). The pilot must coordinate this action with the helicopter manager prior to exiting the aircraft. Passengers must not be on board or inside the arc of the rotor(s) when the pilot exits the aircraft.

B20.11 Water bucket use. The procedures shown in the Water Bucket Use Procedures Exhibit must be used for all bucket operations.

B21 Security of Aircraft and Equipment

The Contractor will be responsible at all times for the security of contract aircraft, vehicles, and associated equipment.

B21.1.2 Using other means of securing or disabling an aircraft is

"Regardless of any status as a public aircraft operation, the Contractor must operate in accordance with their approved FAA Operations Specifications and all portions of 14 CFR part 91 (including those portions applicable to civil aircraft) and each certification required under section B2 unless otherwise authorized by the CO."

DOI Aviation Resource Management

WHY?

- **FAA certification provides foundation of safety administered by Subject Matter Experts (SMEs) which enables DOI to administer specific policies targeted at higher risk mission oriented environments.**
- **Civil regulations are unable to address unique operating characteristics associated with natural resource operations.**
- **Good government – eliminates needless duplicity and capitalizes on the the capabilities of an existing agency (FAA) with relevant SMEs.**
- **Allows DOI SMEs to focus on addressing specific operations such as**
  - **Animal Capture Eradication and Tagging of Animals (ACETA)**
  - **Search And Rescue (SAR)**
  - **Aerial Firefighting**

Inspections

DOI Safety Compliance Specialists inspect all contractual requirements that exceed FAA minimum standards that are appropriate for the aircraft, pilot, and mission parameters and:

- Possess Airframe and Powerplant Mechanic Certificates with FAA Inspection Authorizations for aircraft carding.
- Are CFI and CFII certified for Pilot evaluations/carding. They administer flight checks for pilots performing other than point-to-point missions.
- Physically inspects aircraft, operator's facilities, and pilots.
- Examines all FAA required aircraft maintenance records for the aircraft under contract.

Inspections

AMD-36A (10/06)

INTERAGENCY DATA CARD
(Airplane)

Aviation Management

AMD-68 CONTROL NO. _____

RENTAL NO. - ARA - _____

CONTRACT NO. _____ ITEM NO. _____

DESIGNATED BASE _____

OPERATOR _____ MAKE AND MODEL _____

ADDRESS _____ FAA REGISTRATION NO. _____

_____ MFG. SERIAL NO. _____

PHONE NO. _____ HOBBS / TACH READING _____

Authorized Uses: **EXPIRES:** _____

- ___ PASSENGER (No. Pax ___)(9P)
- ___ CARGO (9C)
- ___ SINGLE PILOT IFR (W / AUTOPILOT)
- ___ LOW LEVEL (6)
- ___ FIRE SURVEILLANCE / RECON (USFS ONLY)
- ___ PARA CARGO (2P)
- ___ SMOKE JUMPER (3D)
- ___ OTHER _____

APPROVED BY: (Signature) _____ DATE: _____

(Print Name) _____ REGION/AREA: _____

AIRCRAFT INFORMATION

TOTAL AIRFRAME TIME _____
ENG. MAKE & MODEL _____
ENGINE HOURS:
#1 - TSN: _____ TSO: _____ HSI: _____
#2 - TSN: _____ TSO: _____ HSI: _____
L/H PROP TSO _____ O/H DATE _____
R/H PROP TSO _____ O/H DATE _____
DATE OF LAST ANNUAL INSP / AAIP _____
TIME - LAST 100-HR / PHASE _____
AIRWORTHINESS & REGISTRATION _____
WEIGHING CONFIGURATION _____
DATE OF LAST ACTUAL WEIGHING _____
MAXIMUM GROSS WEIGHT _____
EQUIPPED WEIGHT _____
USEFUL LOAD _____
FLIGHT MANUAL / SUPPLEMENTS _____
TIME CHANGE & A.D. LIST _____
MAINTENANCE RECORDS _____

I. MANDATORY EQUIPMENT: **SATISFACTORY** YES / NO

- SHOULDER HARNESS (FRONT)
- SEAT BELTS
- VHF COMM. RADIO (720 CH) (1 OR 2 ?)
- FIRE EXT. (MIN. 1.5 LB. B/C)
- FIRST AID KIT
- ELT (BATT DATE DUE _____)
- LIGHTING - NIGHT OPERATIONS
- AVIONICS INSTALL/MAINT. STDS
- NAV CHARTS/SUPPLEMENTS

II. LOW LEVEL

- ___ INTERPHONE--PILOT/OBS/1 AFT PAX
- ___ JJ-033 AND JJ-034 JACKS
- ___ INERTIA REELS (IF APPLICABLE)
- ___ SURVIVAL KIT
- ___ WHITE STROBE LIGHT (S)

AMD-36B (10/06)

INTERAGENCY DATA CARD
(HELICOPTER)

AVIATION MANAGEMENT

AMD-68 CONTROL NO. _____

RENTAL NO. -ARA- _____

CONTRACT NO. _____ ITEM NO. _____

DESIGNATED BASE _____

OPERATOR _____ MAKE, MODEL AND SERIES _____

ADDRESS _____ FAA REGISTRATION NO. _____

_____ MFG. SERIAL NO. _____

PHONE NO. _____ HOBBS READING _____

Authorized Uses: **EXPIRES:** _____

- ___ PASSENGER & CARGO (9P)
- # PAX. SEATS _____
- ___ CARGO ONLY (9C)
- ___ EXT. LOAD (SLING) (1A)
- ___ LOW LEVEL (6)
- ___ FIRE SUPPRESSION - INTERAGENCY (2)
- ___ FIRE SUPPRESSION - LOCAL (3)
- ___ WATER/RETARDANT BUCKET (3R)
- ___ HELI - TANKER (FIXED TANK) (3R)
- ___ AERIAL IGN (TYPE) (8) _____
- ___ PLATFORM (OCS) (7N)
- ___ EXTENDED OVERWATER (5X)
- ___ RAPPELLING (4R)
- ___ OTHER _____
- ___ OTHER _____

APPROVED BY: (Signature) _____ DATE: _____

(Print Name) _____ REGION/AREA: _____

AIRCRAFT INFORMATION

TOTAL AIRFRAME TIME _____
ENG. MAKE & MODEL _____
ENG. HOURS:-TSN/TSO #1 _____ #2 _____
DATE OF LAST ANNUAL INSP / / AAIP _____
TIME -LAST 100-HR / PHASE _____
AIRWORTHINESS & REGISTRATION _____
DATE OF LAST ACTUAL WEIGHING _____
MAXIMUM GROSS WEIGHT _____
EQUIPPED WEIGHT _____
USEFUL LOAD _____
WEIGHING CONFIGURATION _____
FLIGHT MANUAL _____
TIME CHANGE & A.D. LIST _____
MAINTENANCE RECORDS _____

I. MANDATORY EQUIPMENT: **SATISFACTORY** YES / NO

- INTERPHONE - - PILOT AND OBS
- U-61 A/U JACKS (OBS)
- PTT (PILOT & OBS)
- SHLDR HARNESSES W / REELS (FRONT)
- SEAT BELTS (ALL)
- VHF COMM. RADIC (720 CH)
- FIRE EXTINGUISHER
- FIRST AID KIT
- ELT (BATT DATE DUE _____)
- HOBBS INSTALLATION
- LIGHTING - NIGHT OPERATIONS
- AVIONICS INSTALL/MAINT. STDS
- EPIRB (AK ONLY - IF FIXED ELT)

IA. SPECIAL USE

- ___ WHITE OR RED/WHITE STROBE
- ___ SURVIVAL KIT

II. EXTERNAL LOAD

- ___ 133 CERT. NO. _____ EXP. DATE _____
- ___ CARGO HOOK _____
- ___ CARGO RACKS (IF APPLIC.)
- ___ CONVEX MIRROR (IF APPLIC.)

Acquisition/Contracting of Vendor Aviation Services

Contract Solicitation and Award:

DOI evaluates prospective contractor's offers, both objectively and subjectively, leading to award of contracts to contractors that have:

- Appropriate FAA certifications that are the responsibility of FAA to oversee.
- Outstanding past performance, appropriate experience, instituted safety programs and capable aircraft.

All factors are weighed against the offered price.

Aircraft Operations Management (Oversight)

DM requires basic management structure for Bureau Managers

- **Bureaus further develop and administer independent bureau specific management responsibilities via respective National Aviation Plans.**
- **Many Bureau units (i.e. state, National Park) develop more specific (subordinate) policy and plans in order to accommodate unique geographic and/or mission requirements.**

BLM

2011 National Aviation Plan

Department of the Interior

Bureau of Land Management

March 2011

BUREAU OF LAND MANAGEMENT

2011 NEW MEXICO STATE AVIATION PLAN

PREPARED BY: /s/ John Selkirk — STATE AVIATION MANAGER — 4/19/11 DATE

REVIEWED By: /s/ Don Kearney — STATE FIRE MANAGEMENT OFFICER — 4-21-11 DATE

APPROVED BY: /s/ Linda S.C. Rundell — STATE DIRECTOR — 4/22/11 DATE

DOI Aviation Resource Management

How is oversight administered?

- **Aviation Program Evaluations**
- **Aircraft & Pilot Inspections that supplement FAA inspections/oversight**
- **Maintenance Management (fleet)**
- **Mission training requirements (qualification, re-currency) for management, crew, and pilots**
- **Bureau feedback on vendor performance to Contracting Officer**

Interdependent Responsibilities

Goal	Driver	Areas of Focus/Dependency
Safe and efficient aircraft operations supporting government missions	FAA Airman and aircraft certification standards	• 14 CFR Airman & Aircraft • Ops Specs Development • Continued Airworthiness - Maintenance Compliance • FSDO surveillance frequency
	Government standards specific to mission requirements	• Determine Mission Requirements • Contract Specifications or Departmental Regulations • DOI Inspections/Aviation Program Evaluations • Bureau reporting of vendor performance
	Operator standards and direct managerial oversight	• Compliance with 14 CFR • Compliance with Ops Specs • Compliance with DOI mission requirements (DM/Contract) • Company specific policies

FAA and DOI Partnership: Complimentary (But Separate) Mechanisms To Ensure Safety

FAA Inspection: Aircraft airworthiness & airman certification (FSDO)

FAA Safety Performance Analysis System (SPAS)

FAA surveillance Priority Indexing (N 8900.132)

FAA Surveillance Planning

FAA Oversight: FAR Airman & Aircraft

Incidents & compliance failures DATA

DM & Contract Requirements incorporating FAA aircraft & airman certification (FAR parts 91, 133, 135, 137, etc.)

DOI Inspection: Contract/mission requirements compliance – ensure proper FAA certification

DOI Airman & Aircraft Carding Authority

DOI Oversight: Mission Specific Airman & Aircraft

DATA

If the system fails…

DOI Mishap Prevention Products

AMD-35A
(9/03)

Interagency Aviation Lessons Learned

No. IALL 11-05 Date: September 1, 2011 Page 1 of 2

Subject: Wire Strike Protection Kits

Area of Concern: Helicopter Operations

Distribution: All Helicopter Activities

Discussion: Recently, a tender helicopter struck and severed two power lines while landing at a temporary refueling site. The selected landing site was a gravel and asphalt parking area used by the state highway department located at the intersection of two highways.

At approximately 5:50 pm MDT, the pilot approached from the northeast at an altitude of 200 feet above ground level (AGL) and circled the parking area clockwise in order to identify hazards in the area.

The pilot stated that he was concerned about the three or four semi-tractor trailers moving within the parking area. Other obstacles included a wheeled ball cleaner located next to a 45 foot power pole and a large pile of sand located at the west end of the parking area.

There were two 8 strand, ⅜" diameter power lines attached to the top of the power pole. The lines were approximately 4 feet apart and sloped down to the power poles located on the northwest edge of the parking area. The light grey color of the wires and the grey clouds over the distant mountains made it practically impossible to see the wires.

The pilot entered the final approach path and descended to an altitude of approximately 30 feet AGL placing the aircraft at a similar height of the power lines. **Due to the pilot's intense focus on the landing area, moving vehicles and environmental factors, he was unaware of the wires or the power poles.**

Subject: Wire Strike Protection Kits September 1, 2011 Page 2 of 2

The helicopter impacted the power lines at an airspeed of less than 5 knots and cut them with the top wire strike protection kit installed on the aircraft. The pilot stated that he felt a slight tug as he cut the first wire and after cutting the second power line, looked to the left and saw the power pole. Realizing what had just happened, he hauled the helicopter up thus landed. Fortunately, there was no injury to the pilot or damage to the helicopter. Had it not been for the wire strike protection kit, the power lines could have become entangled in the main rotor system with catastrophic results. According to Helicopter Association International (HAI), wire strikes are the number one cause of helicopter accidents and account for 48% of all fatal accidents. While there is no requirement for ground crews to be in place prior to a helicopter's arrival, it might have prevented the wire strike from occurring in the first place.

The wire strike protection kit is the last defense against wire strikes. A comprehensive mission brief to include known hazards annotated on a hazards map, a thorough risk assessment of refueling areas, and maintaining situational awareness is your first line of defense. But when all else fails, it's good to have a backup.

← Having this

← kept this

From happening.

/s/ Keith C. Raley

Keith C. Raley
Chief, Aviation Safety
& Program Evaluation

/s/ Ron Hanks

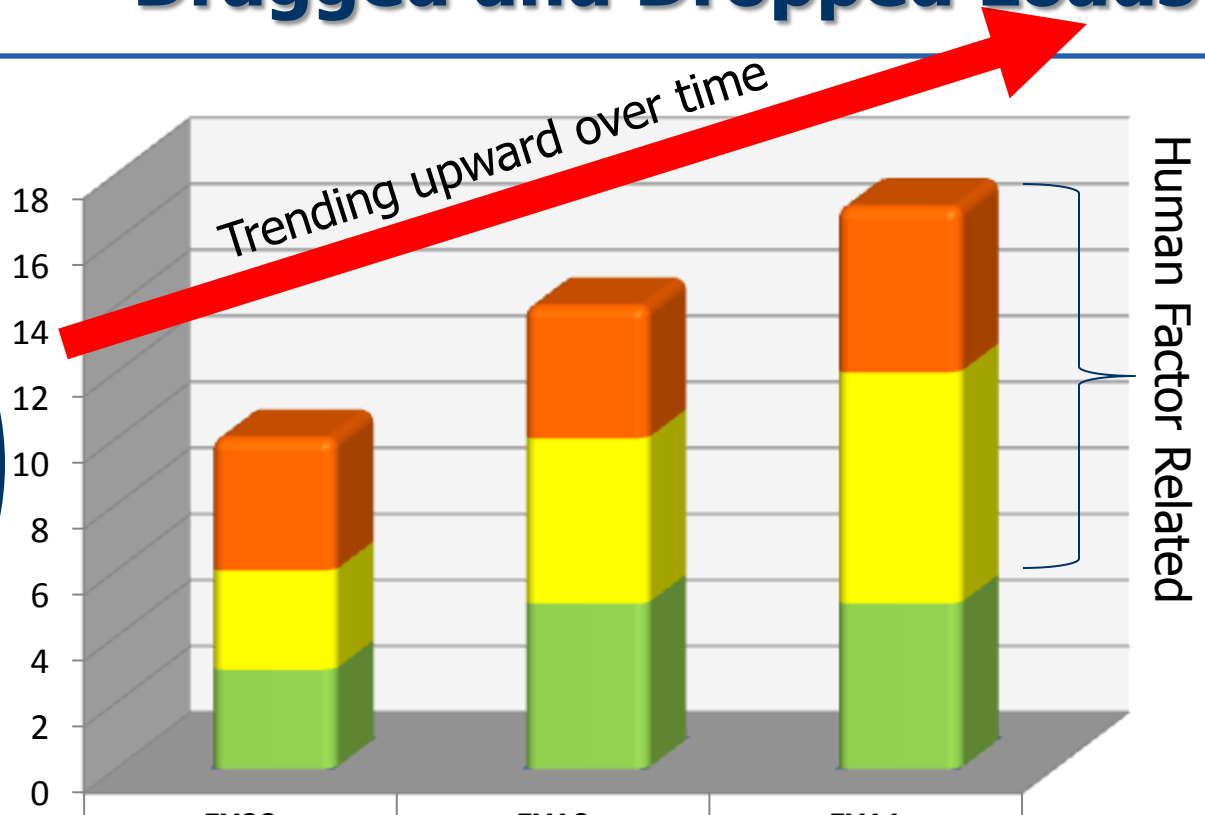
Ron Hanks
Branch Chief, Aviation Safety
Management Systems, USFS

http://amd.nbc.gov/safety/index.htm

An ISO 9001:2008 CERTIFIED Shared Services Provider
BSI FS 537331

Mishap Prevention Leading Indicators: Dragged and Dropped Loads

From FY09 to FY11 reported events on **dragged/dropped loads increased by 70%** (compared to overall reporting which only increased by 21%).



	FY09	FY10	FY11
dropped load: human factors	4	4	5
dragged load: human factors	3	5	7
dropped load: mechanical	3	5	5
dragged load: mechanical	0	0	0

Fi$cal Challenge$

- Hiring experience
- Training
- Maintenance
- Equipment/capital improvements related to safety and performance
- Operator managerial oversight
- Government oversight

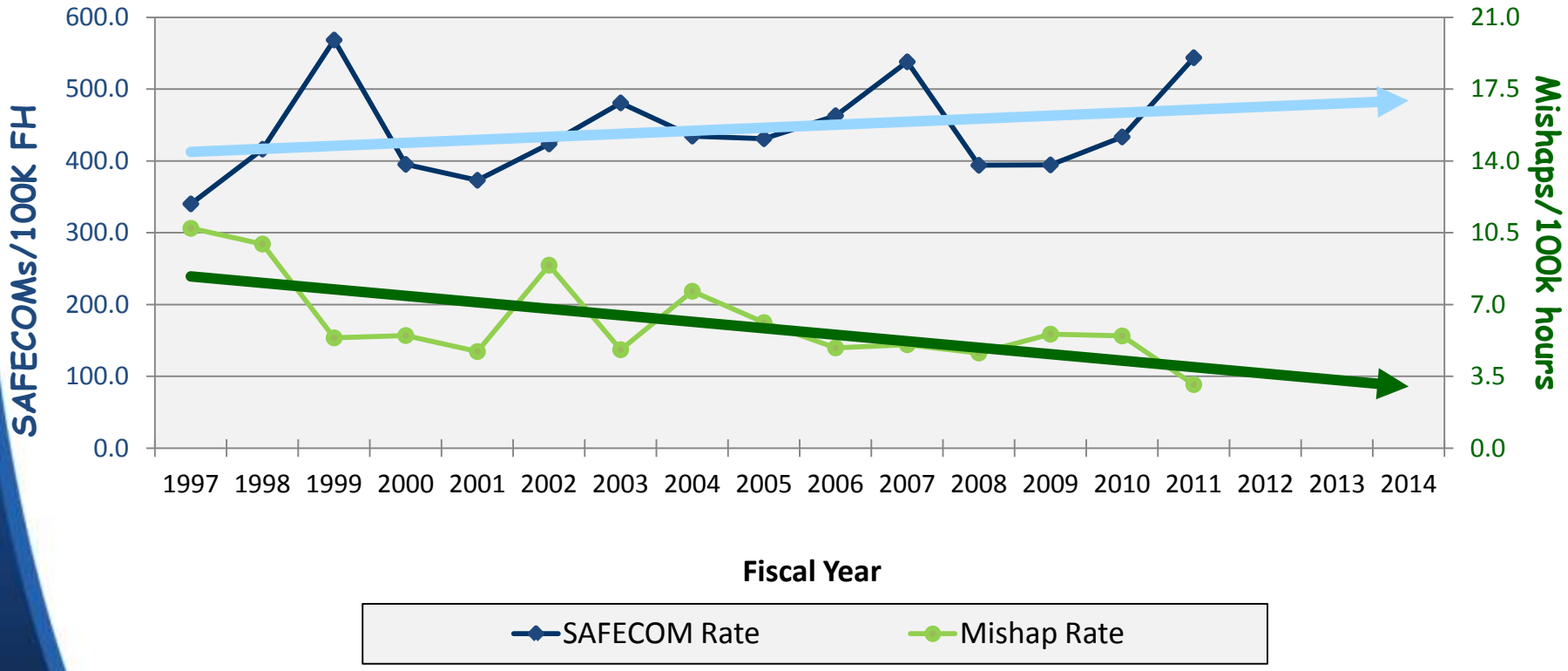
?

- Public expectations
- Availability
- Continual Improvement initiatives (e.g. FOQA, etc.)

Program Preventative Measures

- Mature on-line and paper safety reporting system (SAFECOM).
- Highly Experienced Aviation Mishap Investigators who enable us to examine and understand latent contributing conditions. They also provide recommendations in order to prevent a similar mishap from occurring in the future.
- Program Evaluations that meet OMB A123 requirements.
- DOI-AMD Aircraft & Airman inspections
- Vendor performance feedback
- Gradual implementation of SMS components in to contract solicitations that require vendors to provide evidence of their SMS.

SAFECOM Reporting and Accident Rate Comparison



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SAFECOM (Hazard Reporting)

- The SAFECOM system is used to report any condition, observation, act, maintenance problem, or circumstance with personnel or the aircraft that has the potential to cause an aviation-related mishap.
- **The SAFECOM system is not intended for initiating punitive actions**.
- Submitting a SAFECOM is not a substitute for "on-the-spot" correction(s) to a safety concern. It is a tool used to identify, document, track and correct safety related issues.

Safety Communiqué Form

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has the potential to cause an aviation-related mishap. Submitting a SAFECOM is not a substitute for on-the-spot correction(s). **Note:** denotes a required input field.

SAFECOM
Aviation Safety Communique'

REPORTED BY (optional)

Name:
E-Mail:
Phone:
Cell Phone:
Pager:
Organization:
:Org-Other
Date Submitted: 11/22/2011

EVENT

Date: *mm / dd / yyyy*
Local Time: *24 hour clock*
Injuries:
Damage:
Operational Control:
Location: *Airport, City, Lat/Long, or Fire Name*
Agency:
Region:
State:
Unit:
Refresh Unit Menu

MISSION

Type:
Other:
Procurement:
Other:
Persons Onboard:
Special Use:
Hazardous Materials:
Departure Point:
Destination:

AIRCRAFT

Type:
Tail #:
Manufacturer:
Model:
Owner/Operator:
Pilot:
Manager:

NARRATIVE (A brief explanation of the event - 8000 character max)

C10 Personnel Conduct

C10.1 Replacement of Contractor Personnel

C10.1.1 Contractor employees required to work or reside on Federal property (National Parks, Refuges, Indian Reservations, etc.) are expected to follow the facility manager's rules of conduct that apply to both Government or non-Government personnel working or residing at these facilities. The Contractor may be required to replace employees who do not comply with these rules of conduct.

C10.1.2 The Contractor must replace any employee who performs unsafely, ineffectively; refuses to cooperate; is unable or unwilling to adapt to field living conditions; or whose general performance is unsatisfactory, disruptive or detrimental to the purpose for which contracted.

C10.1.3 The CO will notify the Contractor of all known unsatisfactory personnel conduct or unsafe performance. The employee may be afforded an opportunity for corrective action when the conditions warrant. When directed by the CO, the Contractor must replace unacceptable personnel not later than 24 hours after such notification, or as otherwise mutually agreed. The decision as to unacceptability will be at the sole discretion of the CO.

C10.2 Suspension of Pilot

C10.2.1 Upon receipt of written correspondence which indicates a serious safety concern, the Government may suspend the pilot.

C10.2.2 Upon involvement in an Aircraft Accident or National Transportation Safety Board (NTSB) Reportable Incident (see 49 CFR Part 830), a pilot **will** be suspended from pilot duties and from any other activity authorized under the Interagency Pilot Qualification card(s), pending results from the AMD investigation.

C10.2.3 Upon involvement in an Incident with Potential as defined under Mishaps, a pilot **may** be suspended from pilot duties and from any other activity authorized under the Interagency Pilot Qualification card(s), pending the investigation outcome.

C10.2.4 When requested, the contractor must surrender the pilot's Interagency Pilot Qualification card(s) to the COTR or other authorized agency representative. Pilot suspension will continue until the investigation findings and decision indicate no further suspension is required and the Interagency Pilot Qualification card(s) is returned to the pilot; or revoked by the issuing agency.

C11 Contractor Safety Management Program

C11.1 The Contractor must develop and maintain programs necessary to ensure safe practices during ground and flight operations. These programs are a material part of contract performance.

C11.2 Examples of such programs are (1) personnel activities, (2) maintenance, (3) safety, and (4) compliance with regulations.

C12 Safety Management System (SMS) Components.

C12.1 The Contractor must provide a written submittal in response to the Safety Management System (SMS) Components identified in the Questionnaire in Exhibit 7. The Contractor's submittal should consist of implemented practices for their specific company. For purposes of this submittal, the contractor must provide written evidence or describe how the specific processes or requirements are implemented within their organization. This submittal will be incorporated and made part of the contract.

C12.2 The Contractor is required to provide written updates that are made to their SMS components to the CO during the life of the contract.

C12.3 This SMS Components Questionnaire and any supporting documentation will be evaluated as described in Section D.

C13 Mishaps

C13.1 **Mishap Definitions**

As used throughout this contract, the following terms will have the meanings set forth below.

C13.1.1 The following terms are as defined in 49 CFR Part 830:

Aircraft Accident
Fatal Injury
Incident
Operator
Serious Injury
Substantial Damage

C13.1.2 Airspace Conflict. A near mid-air collision, intrusion, or violation of airspace rules.

C13.1.3 Aviation Hazard. Any condition, act, or set of circumstances that exposes an individual to unnecessary risk or harm during aviation operations.

C13.1.4 Incident with Potential. An incident that narrowly misses being an accident, and in which the circumstances indicate significant potential for substantial damage or serious injury. Classification of an incident as an "Incident with Potential" is determined by the agency ASM.

C13.1.5 Maintenance Deficiency. An equipment defect or failure which affects or could affect the safety of operations,or that causes an interruption to the services being performed.

C13.1.6 SafeCom. An agency Aviation Safety Communique used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation related accident (Form AMD-34 or FS 5700-14).

C13.2 **Mishap Reporting**

C13.2.1 The Contractor must immediately, and by the most expeditious means available, notify the NTSB AND the agency ASM when an "Aircraft Accident" or NTSB reportable "Incident" occurs.

3.2	SAFETY MANAGEMENT SYSTEM COMPONENTS	Y	N	NA	OFFEROR ACTION REQUIRED
IS-BAO	Standard				
3.2.1	**Safety Policy and Objectives**				
a&b	a. Are key safety personnel appointed? b. Do you have an internal emergency response plan?				Describe and provide evidence.
3.2.2	**Risk Management**				
a.	Has the company developed and maintained procedures for: Hazard identification, risk assessment and mitigation?				Describe and provide evidence.
3.2.3	**Safety Assurance**				
a.	Has the company developed and maintained a means of monitoring and measuring safety performance, Identifying and managing organizational changes that may affect safety, ensuring continual improvement?				What action has your company taken and/or plans to take to eliminate accidents? Describe and provide evidence.
3.2.4	**Safety Promotion**				
a.	Has the company developed and maintained a formal means of safety communication?				Briefly describe technology your company has acquired to facilitate communication with deployed pilots. Describe how your company's compensation practices discourage risk taking. Describe and provide evidence.
4.1	**Organization and Personnel**				
a.	Does the company have an organizational structure that clearly defines duties, authorities and accountabilities?				Describe and provide evidence.
4.1.1	Where the organization has more than one operating base has the management structure addressed the management responsibilities at each location?				Describe and provide evidence.
4.3	**Crew Member Qualifications**				
a.	Are there procedures to ensure that all aircraft crewmembers: hold valid licenses and certificates to include medical certificates, meet all recency requirements and have fulfilled the operator's training and proficiency requirements? Have they been effective?				What are your minimum hiring standards for SEAT pilots? Briefly describe your program for qualifying your pilots to fly the aircraft. Does this program include stall, high AOA handling training? What are your company's currency/recency standards? How do you evaluate pilot performance? Describe and provide evidence.
4.4	**Maintenance Personnel Qualifications**				
4.4.1	Do the maintenance personnel hold the licenses and ratings required by the FAA?				Provide percent of maintenance personnel with A&P credentials and percent with IA certification. Provide evidence.

5.1	**Training Programs**				
5.1.1	Does the company have a training program that ensures that personnel are trained and competent to perform assigned duties?				Briefly describe your pre-season workup training program. Do you provide your pilots training in fire suppression techniques and procedures above and beyond that administered by BLM? Do you train your pilots, both initially and annually, on preparation of invoices, flight use reports, and SAFECOMs? Describe and provide evidence.
9.1	**Maintenance Control System**				
9.1.1	Does the operator have a maintenance control system that is appropriate to the type and number of aircraft operated and the manner in which maintenance is conducted?				Briefly describe your home base maintenance program. In-house or sub-contracted? If not in-house, specify name and address of primary maintenance facility. Inspection program is to what standard (137, 91 or 135)? Facility FAA or manufacturer certified Describe your quality assurance program and provide evidence.
9.2.2	Has the operator included provisions in the company operations manual for flight crew to obtain maintenance services when away from home base?				Will you do scheduled inspections in the field? Who is responsible for unscheduled maintenance? Pilots qualified for routine servicing? Describe and provide evidence.
10.1	**Company Operations Manual**				
	Company Operations Manual Does the manual contain the following: operational control system and SOPs				Does your company have policies that prescribe how and how often pilots will communicate with home base? Do your pilots deploy with laptop computers to those bases where internet access is available? Describe and provide evidence.


PRIMEVAL
WHIRL

Questions?

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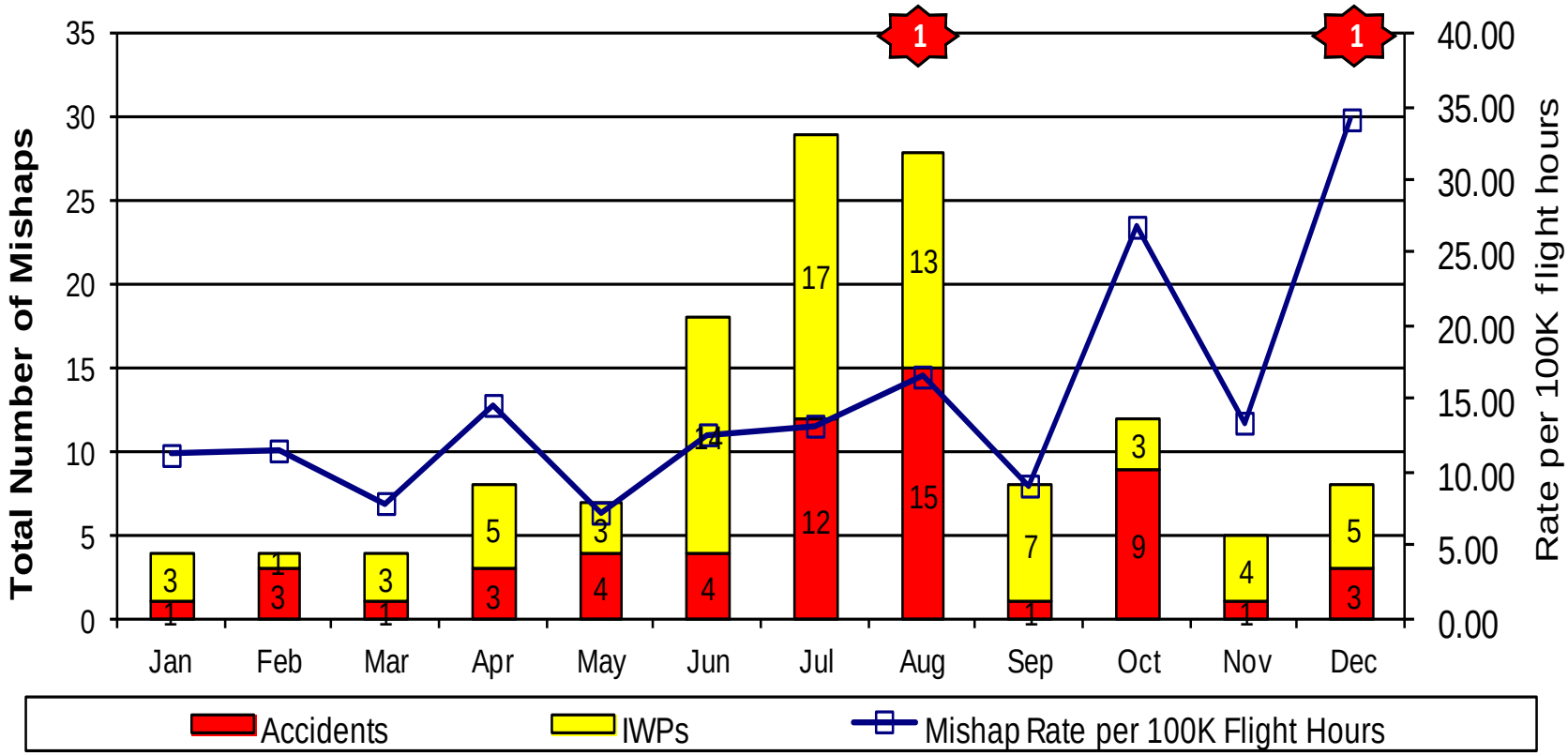
Appendix

Mishaps by Month
(CY 1999-2011)



1 Key: Number of accidents that occurred in this month during FY11

FY 11 DOI Mishap Summary

Location	Date	Severity	Operator	Aircraft
Lake Clark, AK	Dec 1, 10	IWP	Fleet	PA-18 SuperCub
Reedsport, OR	Dec 31, 10	Accident	Fleet	Quest Kodiak
West Palm Beach, FL	Feb 18, 11	IWP	Fleet	AS 350 B2
Port Alsworth, AK	Apr 14, 11	IWP	Fleet	Cessna 206
Bethel, AK	Apr 15, 11	IWP	Fleet	DHC-2 Beaver
Manteo, NC	Jun 19. 11	IWP	Vendor	Bell 407
Cinnabar, AK	Jul 26, 11	IWP	Vendor	Cessna 207
Northway, AK	Aug 3, 11	Accident	Vendor	DHC-2 Beaver
Wendover, NV	Aug 13, 11	IWP	Vendor	AS 350 B2