Organizational Culture in Aviation Fire Suppression

A lessons learned overview of emerging issues and challenges in a multi-agency aviation fire suppression program
DENNIS HULBERT
Regional Aviation Officer
US Forest Service
Retired
Large Incidents - August 13, 2004

National Shared Resources

- Agency Responsibility
- Agreements
- Contracts
- Memorandums of Understanding

Interagency Mobilization

[Map of the United States with marked wildfires and locations]

1. Boundary Fire
2. Central Complex
3. Taylor Complex
4. Bear
5. Rattlesnake Peak
6. Oregon
7. Freezeout
8. Mud Lake
9. Meebee Pass
10. Fischer
11. Hunt
12. Mile Marker 44
13. Pot Peak/Sisi Ridge Complex
14. Early
15. Deep
16. Sugar II
17. Porter
18. Riggs
19. Middle Ridge
20. Camp 36
21. Salt Creek
22. Humboldt
23. Promontory
24. Pitchfork
25. Section 33 WFU
Call When Needed
Federal Resource Agencies
National Guard
State & Local Government

INTERAGENCY COOPERATION

Military
Federal Agencies Use Exclusive Use Seasonal Contracts And limited Agency Owned Aircraft
All aircraft used on Federal Emergencies meet Interagency Standards with pilots and airframes.
Interagency Contract Standards

- Current FAA Certifications
- Avionics, Radios and Systems
- Aircraft Maintenance & Support
- Aircraft Equipment
- Pilot Requirements
- Pilot Flight and Duty Limitations
All Federal Resources Shared between agencies through cooperative agreements
State & Local Emergency Departments Use Federal Excess, Contract, and Purchased Aircraft
State & Local Aviation Resources must meet Interagency Standards before they can operate in the same airspace/emergency or be shared with federal agencies.
Common Interagency Standards

• 1,500 hours PIC
• Annual Check Ride
• Incident Command Training
• Fire Behavior Training
• Common Terminology
• Common Communication/radios
Military Resources must also meet Interagency Standards and are only used when no other aircraft are reasonably available.
Common Interagency Standards for Military
- 500 hours PIC (Active Military)
- 1,500 hours PIC (National Guard)
- Annual Check Ride
- Incident Command Training
- Fire Behavior Training
- Common Communication/radios
Incident Command System

- Standard Terminology
- Standard Training
- Standard Command Structure
- Standard Safety Regulations
- Common Dispatch
- Common Communication/radio
3 C’S:
COMMUNICATIONS
CLEARANCE
COMPLY

NOCOM
IF COMMUNICATIONS ARE NOT ESTABLISHED, HOLD AT THE 7NM RING UNTIL THEY ARE ESTABLISHED!!!

DO NOT PENETRATE THE FTA IF YOU CANNOT COMPLY WITH A CLEARANCE

FIRE TRAFFIC AREA (FTA)

ATGS ALT. ALTITUDE +1000’

TANKER INITIAL ENTRY ALTITUDE +500’

TANKER MANEUVERING ALTITUDE APPROX. 1000’ AGL

500 AGL APPROX

12NM Initial Contact Ring

7nm NOCOM HOLDING RING

5 NM RADIUS

500 AGL APPROX
California is the most diverse, complex, multi-agency Region in which wildland fire aviation operations are conducted.
20+ Additional Cooperator A/C Available for I.A.
THE SIEGE

October 21-November 4, 2003

- 6,169 Engines
- 200 Aircraft
- 15,631 Personal Assigned
- 14 Major Fires
- 24 lives lost
- 3,710 Homes
- 750,043 Acers
Traffic backed up on I-15 from closures forced by the wildfires
Emerging Challenges in Aviation Program Management
Major Issues in Aviation Program Management

Safety
What Drove Change?
Major Issues in Aviation Program Management

- Safety
- Costs
Major Issues in Aviation Program Management

- Safety
- Costs

Politics
Major Issues in Aviation Program Management

- Safety
- Costs
- Politics

Media
Major Issues in Aviation Program Management

- Safety
- Costs
- Politics
- Media

Policy
Safety
Costs
Politics
Media
Policy
Risk Assessment principles
Best Value (cost avoided/money invested)
Performance Measures
Technology
National emphasis on incorporating technology to measure:

- Aviation Business Systems
- Real Time Costs/use
- GIS reference mission use
- Safety & Aircraft Performance
- Real Time Tactical Reporting
SAFETY & REPORTING
This page 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).
The Safety Communiqué is designed to report any condition, act, maintenance problem or circumstance which has potential to cause an aviation-related mishap.

- Can be filed in writing or electronically.
PILOTS POSITION

3 Slaved FM's and audio panel
2 VHF AM's
Garmin 530 GPS/AM Radio
12 Inch LCD display
- 15 Inch Color LCD Screen
- Slide-out Keyboard
- 3 VHF FM Radios with Touch pad entry
- Audio Panel and Mapping touch pad
- 2 VHF AM Radios
Front Position ATGS/Copilot

15” Multiple Display Color Screen

Full Forward Flight Controls and Instruments
FLIR Star Safire III

- Laser Range Finder
- 3-5 Micron Infrared Camera
- Laser pointer
- 3 CCD Camera
- Spotter Scope
FLIR Hand Controller
Avalex Mapping System Integrated With FLIR Camera
Various Map Configurations with Multiple Display Options

TCAD Information Displayed On Any Map

Custom Fire Editing
Mission:

Receive and Record Real Time Microwave and Map Data

Data Recovery Van
COBRA POWER
Fire Progression Mapping

Early Incident 2004 Fire Progression Map

Legend:
- Blue: August 9, 6:00 PM
- Green: August 10, 6:00 AM
- Yellow: August 10, 6:00 PM
- Orange: August 10, 10:00 PM
- Red: August 11, 10:00 AM
Data Administrator
and
Cartographer

ftp site
inciweb.org

Products:

- fire perimeter maps
- fire progression maps
- ownership and DPA maps
- fuels
- fire history
- weather maps
- FARSITE output maps
- sensitive areas
Martin Mars/Sikorsky S-76
Real Time Technology

"THE POWER OF PERFORMANCE IS MEASUREMENT"

BY COULSON GROUP
• Certified single pilot IFR operations
• Full Air Tactical Group Supervisor Radio Package
• HD Camera screen, camera hand controller and mapping system
• Two HD Digital video recorders for HD & IR Simultaneously
• Laser Pointer
• Autotracker
• Downlink
Real Time Data Reporting
Night Vision Technology
Fire Simulators
Product and Application

The Dip Source
Portable Dip Tanks

The New “Smart Tank”
QUESTIONS