

NIGHT AERIAL FIREFIGHTING OPERATIONS SUMMIT



Helicopter 531

Air Attack 51

OBJECTIVES

- ▣ Describe the Night Air Operations Program.
- ▣ Describe how Night Air Attack operates
- ▣ Describe ordering and dispatching.
- ▣ Brief reference material and policy.



Night Air Operations History

- ▣ In 2010, the FS completed a Helicopter Night Operations Study that reviewed the previous and current use of night firefighting helicopters, analyzed available technology, and completed a risk assessment for helicopter night missions.
- ▣ From that study, the Chief of the Forest Service decided to initially implement helicopter night flying operations beginning in 2013 in southern California to drop water and augment local cooperator night flying capability.
- ▣ Additionally, a night fixed-wing air attack was added to the program to provide aerial supervision, infrared and camera support .



Night Air Operations

- ▣ 67 hazards from the 2010 study related to water dropping were identified.
- ▣ 109 mitigation actions were completed prior to operations.
- ▣ National Night Air Operations Plan developed
- ▣ Interagency standards set by FIREScope
- ▣ Quality Assurance audits conducted during the season
- ▣ AAR completed at the end of the contract

USFS Helicopter Night Flying Program History



- 1976
 - 1st Contracted Helicopter with Night Vision Capability

- 1977
 - Fleet expanded with 2 helicopters
 - Helicopters based out of Rose Valley (LPF) and Tanbark (ANF)

- 1984
 - Program Discontinued

- 2010
 - Completed assessment to reinstate a 24 Hour helicopter module

- 2013
 - Program Reinstated



Night Air Operations



- ▣ In 2010, the FS completed a Helicopter Night Operations Study that reviewed the previous and current use of night firefighting helicopters, analyzed available technology, and completed a risk assessment for helicopter night missions.
- ▣ From that study, the Chief of the Forest Service decided to initially implement helicopter night flying operations and an Air Attack beginning in 2013 in southern California to drop water only and augment local cooperator night flying capability.

Night Air Operations

- ▣ Mindful night flying program development (safety as primary focus)
- ▣ Interagency standards set by FIREScope
- ▣ FAA and USFS NVG Approved Pilots & Aircraft
- ▣ Highly skilled USFS fire contract pilots
- ▣ Policy/Procedure/Operations Guide completed in advance of Night Air Operations implementation
- ▣ Ongoing critical auditing / AAR's

Night Air Operations

- ▣ Managing Expectations:
 - Life, property or critical infrastructure be threatened to justify the use of the night flying helicopter.
 - At night, H-531 will be limited to water-dropping missions only.
 - Daylight missions will be unrestricted to normal aircraft missions.
 - The Forest Service will continue to utilize cooperator night flying helicopters on an as-needed basis.

Night Air Operations

A helicopter is shown in flight at night, positioned in the upper right quadrant of the frame. Below the helicopter, a large, intense fire is burning, with bright orange and yellow flames rising into the dark sky. The background is a dark, hazy night sky, and the overall scene suggests a rescue or emergency operation in a hazardous environment.

- ▣ Managing Expectations:
 - Additional checklist need to be completed.
 - ▣ Appendix in FIRESCOPE's Night Flying Guidelines.
- ▣ Have an Nighttime AOBD or ASGS.

HELICOPTER 24 HOUR MODULE



- ▣ Bell 205 A1++
- ▣ Exclusive Use
- ▣ Helicopter Express
- ▣ **Daily Contract Personnel: 7**
 - 2 Night Pilots
 - 1 Day Pilot
 - 2 Fuel Truck Drivers
 - 2 Mechanics
- ▣ 180 days MAP
- ▣ 8 hrs. day flight hrs.
- ▣ 6 hr. night flight hrs.
- ▣ Night Vision Goggle Capable

24 HOUR MODULE CREW

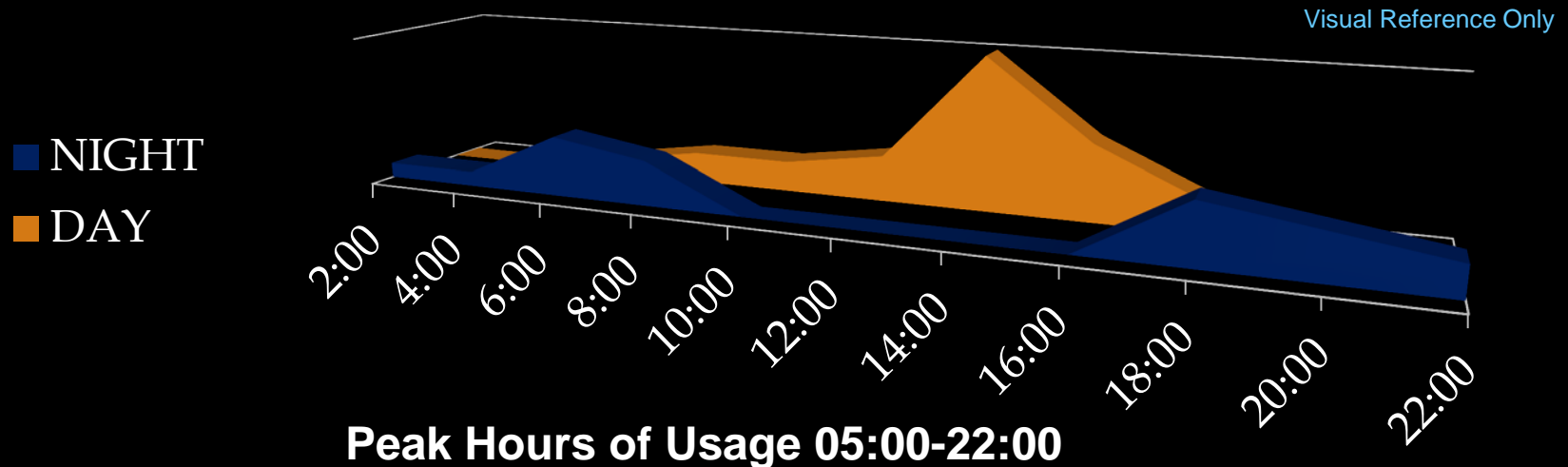


- ❑ 21 Person Module
 - 16 Permanent
 - 5 Seasonal
- ❑ 4 Designated shifts, each providing 12 hours of coverage
- ❑ Equally trained to support all missions day & night
- ❑ 24 Hour coverage during MAP
- ❑ Helibase located at Fox Field Airport in Lancaster, CA

2013 SEASON STATISTICS

PERCENTAGE FLIGHT HOURS

242.6 TOTAL HOURS



HELICOPTER CAPABILITIES

- ▣ Initial Attack
- ▣ Large Fire Incidents
- ▣ Helitack Mission Support
 - Helispot/Fireline Construction
 - Staff Water Points
 - Reconnaissance
 - Fire detection
 - Cargo External/Internal Load
 - *No external loads during night operations*
 - Passenger Transport
 - *Only essential personnel during night operations*
 - Water dropping
 - *Ground fill during night operations*
- ▣ Fill Incident and Helibase Positions



GO NO GO CHECKLIST

NIGHTTIME OPERATIONAL PERIOD AND NVG MISSION GO/NO-GO CHECKLIST

DATE: _____ TIME: _____ SUNSET: _____

PILOT: _____ MANAGER: _____

CHIN BUBBLE & MIRROR COVERS INSTALLED: ☐

NIGHTSUN INSTALLED & CHECKED ☐

AIRCRAFT CABIN LOOSE ITEM CHECK ☐

NVG INSTALLED, CHECKED AND FOCUSED ☐

WEATHER CHECK COMPLETE ☐

NIGHTTIME OPERATIONAL BRIEFING COMPLETED ☐

SIGNATURE CONFIRMS THAT ABOVE CHECKLIST HAS BEEN COMPLETED

PILOT: _____ MANAGER: _____

MISSION:

LOCATION:

TIME:

MISSION NOTIFIED TO CHIEF OFFICER:

NIGHTTIME OPERATIONAL CHECKLIST COMPLETE:

WEATHER BRIEFING/MINIMUMS MET:

MISSION DETAILS BRIEFED:

RISK ASSESSMENT/ANALYSIS COMPLETE:

COMMUNICATIONS PLAN CONFIRMED:

AERIAL HAZARD MAP REVIEWED:

ALTERNATE LANDING SITE/AIRPORT IDENTIFIED:

PPE DONNED AND BUDDY CHECKED:

GO NO-GO

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SIGNATURE CONFIRMS THAT ABOVE CHECKLIST HAS BEEN COMPLETED

PILOT: _____ MANAGER: _____

RISK ASSESSMENT

NIGHT AIR OPERATIONS PLAN APPENDIX H OPERATIONAL RISK MANAGEMENT

(To be completed by _____ prior to any nighttime flight)

Date _____

Pilot _____

Manager _____

ORM Assessment Chart

1. CURRENCY Last Night Flight <3 days 3-7 days >8 days	+0 +3 +8
2. WEATHER Less than 3,000'- 5 sm (anywhere along the route)	+5
3. NIGHT (During any portion of the flight)	+5
4. LOCAL ANF,BDF,CNF,LPF New Location Non-local (Outside normal I.A. area)	+0 +3 +4
5. EARLY MORNING Flight between 0200-0500 (If any portion of the flight to fall within this time window)	+1
TOTAL	

Considerations-

1. Have you been to this destination before? How recently?
2. What are the weather conditions? How confident are you of the weather along the route?
3. Have you thought through the entire mission?
4. Are there any problems with the aircraft that may be a factor for this mission?
5. Do you feel fully rested and capable to accept this mission?
6. Do you have any reservations at all with accepting this mission?

A TOTAL of 20 or greater requires greater operational control or no-go.

HELISPOT WORKSHEET

Night Helispot Information Sheet/Valyermo

Physical Location: address and Lat/Long.

34 26'44"N 117 50' 59"W Elevation 3800' Little to no cell service

Entry to the helispot is approximately 200 yards to the south east of Valyermo Fire Station on the north side of Valyermo Rd.

Special Instructions: Contact information if on private land, Gate code, etc...

Any special needs, call Angeles Dispatch

Hazards: Aerial hazard locations, does it need dust abatement. Approach and departure paths need to be clear of hazards.

A pump building to the south east with power lines directly behind the building going north to south. To the north, there is a trailer with a pole standing on the bed 16' high. Spoke with the Engine Captain and he stated there are plans to remove the trailer.

Landing Area: Description of the LZ, how many aircraft can land there

Accommodations for 1 Type 2 Helicopter for night operations. Two helicopters can be accommodated during day operations.

Water Supply: Description and location of hydrant and known limitations to its supply.

Engine or Water Tender is needed. A stand pipe is located at the Valyermo Fire Station to support the Engine or Water Tender.

Hose-Lay Specifics: Engine parking location, hose needed.

100' of 1 ½" needed. Engine/Water Tender placement will be to the south at the entrance of the helispot.



FEEDBACK FORM



Having had the opportunity to utilize the night flying helicopter (H-531) on a recent incident, we are seeking your input about your experience. In an effort to improve the program, we would like to gain information from you as to how well the apparatus performed for you to accomplish your assignment. The United States Forest Service and Angeles Helitack would greatly appreciate any input you may have to help us make this a successful program.

Upon completion of this questionnaire, would you please submit it to Captain 531, Catherine Eurbín, at the following e-mail address: ceurb@fs.fed.us. If you should have any further questions/comments, do not hesitate to contact Superintendent 531 (Rene Gonzales) @ 626-353-6748 or Captain 531 (Catherine Eurbín) @ 661-305-6253.

Please provide the following information:

Your name and position on your crew:

Name of fire assignment:

Your position on the fire:

Extent of helicopter use:

Duration of Operations:

Please be as thorough as possible in answering the following questions. Any and all information is essential to enhancing the performance of this program.

- 1. What misinformation was briefed to you about the helicopter and its night vision capabilities/limitations?*
- 2. Prior to your experience with the night flying helicopter, how much information/training did you receive?*
- 3. How was your experience with the night flying helicopter? Please explain.*

- 4. How beneficial was the use of the night helicopter during the assignment? Please explain.*
- 5. How effective were the water drops?*
- 6. What information can Angeles Helitack provide to field going personnel to enhance performance on the line or working with the aircraft? How can things be done better?*
- 7. Would you utilize this capability, again, in the future?*
- 8. Was safety a priority for the pilots and personnel involved?*
- 9. Do you have any other information you would like to share with us?*

The following link will lead you to the FIREScope Night Flying Guidelines and may assist with information that is relative to our night flying program.

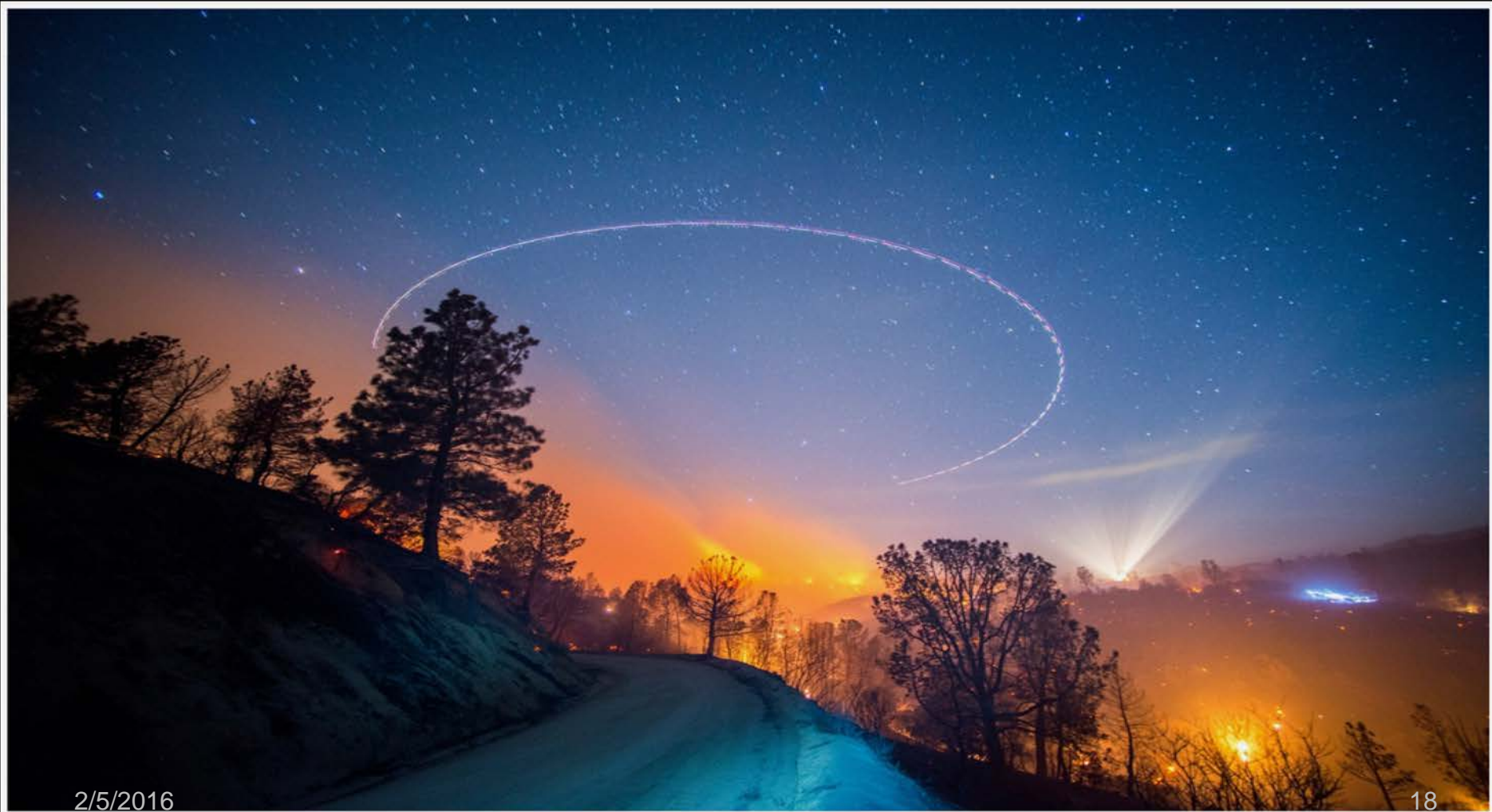
<http://www.firescope.org/specialist-groups/aviation/documents/Night%20Flying%20Guidelines/Night%20Flying.pdf>

Night Fixed Wing operations

Presented by

Richard "Rico" Gonzalez

Region 5 Air Tactical Group Supervisor



Platform

- ▣ Twin Turbine Aero Commander
- ▣ 1 pilot
- ▣ 1 ATGS
- ▣ Tech Specialist as needed for complex fires



Capabilities

- ▣ Recon fires visually
- ▣ Recon fires with IR
- ▣ Provide tactical assessment
- ▣ Monitor fire activity and behavior
- ▣ Supervise multiple aircraft over the fire
- ▣ Coordinate suppression actions
- ▣ Provide real-time intel to day and night Operations (transitional periods)



Equipment

- ▣ Three 760 VHF-AM Radios
(victors/labeled COM 1,COM 2 and COM 3)
- ▣ Three VHF-FM Radios
(Air Tactical/FM 1,FM 2 and FM 3)
- ▣ Global Positioning System: with moving map display
- ▣ A Digital Recorder: that can record the IR/EO (Infrared and Electro Optical)
- ▣ Moving Map: the moving map must work integrally with the Gimbal
- ▣ Multi- Function Displays(MFD) High Definition 1080 pixel or greater



Ordering and Dispatching



- ▣ 24 hour staffed dispatch center
- ▣ Helicopter and fixed wing will be available for initial attack at night, regardless of daytime commitment
- ▣ Night air attack should be ordered for recon to be on scene and coordinate FS night helicopter and cooperators
- ▣ **Criteria for engagement:**
 - ❖ Lives are or will be threatened.
 - ❖ Structures are or will be threatened.
 - ❖ Resources of significant economic values are or will be threatened.
 - ❖ Excessively high suppression cost will be prevented.

Night Air Attack Day and Night



CONTACTS

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QUESTIONS?